RIVERDALE CITY PLANNING COMMISSION AGENDA
CIVIC CENTER - 4600 S. WEBER RIVER DR.
TUESDAY – NOVEMBER 14, 2023

6:00 p.m. – Planning Commission Work Session Meeting *(Conference Room)*

The purpose of the work session is to review maps, plans, paperwork, etc. No motions or decisions will be considered during this session, which is open to the public.

Planning Commission Work Session Items -Planning Commission Training *to be determined.*

6:30 p.m. – Planning Commission Meeting *(Council Chambers)*

A. **Welcome & Roll Call**

B. **Public Comment**

This is an opportunity to address the Planning Commission regarding your concerns or ideas. Please try to limit your comments to three minutes. No action will be taken during public comment.

C. **Presentations and Reports**

D. **Consent Items**

E. **Action Items**

1. a. Consideration of Conditional Use Permit request for Panera Bread, located at approximately 4122 South Riverdale Road, Riverdale, Utah 84405, as requested by Perigee Consulting and Panera Bread Group.

   b. Consideration of recommendation to City Council regarding Final Site Plan proposal for Panera Bread Restaurant, located at approximately 4122 South Riverdale Road, Riverdale, Utah 84405 as requested by Perigee Consulting and Panera Bread Group.

   Items presented by: Mike Eggett, Community Development

F. **Comments**

1. Planning Commission
2. City Staff

G. **Adjournment**

In compliance with the Americans with Disabilities Act, persons in need of special accommodation should contact the City Offices (801) 394-5541 at least 48 hours in advance of the meeting.

Certificate of Posting

The undersigned, duly appointed City Recorder, does hereby certify that the above notice and agenda was posted on this 10th day of November, 2023 at the following locations: 1) Riverdale City Hall Noticing Board 2) the City website at http://www.riverdalecity.com/ and 3) the Public Notice Website: http://www.utah.gov/pmn/index.html.

Michelle Marigoni
Riverdale City Recorder

RIVERDALE CITY
PLANNING COMMISSION AGENDA
November 14, 2023

AGENDA ITEM: E1(a)

SUBJECT: a. Consideration of Conditional Use Permit request for Panera Bread, located at approximately 4122 South Riverdale Road, Riverdale, Utah 84405, as requested by Perigee Consulting and Panera Bread Group.

PRESENTER: Mike Eggett, Community Development

INFORMATION:

a. Exec Summ Panera Final Site Plan PC [20231114]
b. 10-19-5 Standards to Consid Cond Use Permit
c. Panera Bread Cond Use Permit App – 20231031
d. 2023-10-31 Paner Riverdale Site Plan

BACK TO AGENDA

Planning Commission
Executive Summary

For the Commission meeting on: 11-14-2023	Petitioner: *Panera Bread and Perigee Consulting* represented by Russell Haight

Summary of Proposed Action

Panera Bread, as represented by Russell Haight with Perigee Consulting, have submitted updated Final Site Plan documentation for a restaurant site with drive thru services on real estate located at approximately 4122 South Riverdale Road (on the John Paras Furniture building lot site). The affected parcel is zoned in the Community Commercial (C-2) zone, which requires a conditional use permit approval for requested development uses in this zone. The applicant group has submitted a Conditional Use Permit application to be also reviewed and considered by the Planning Commission during this meeting. The property is currently owned by Williamsen Riverdale 2 LLC. A public hearing is not required to consider this site plan proposal nor the conditional use request.

As it relates to the Final Site Plan proposal, following the presentation and discussion of the proposal, the Planning Commission may make a motion to recommend City Council approve the proposed Panera Bread Final Site Plan, approve the proposed final site plan with any requested modifications, tabling the matter to a later date, or not recommend Council approval of the proposed final site plan with the appropriate findings of facts. If a final recommendation is provided, then this matter could move forward to a final site plan consideration review process with the City Council at a later date.

As it relates to the Conditional Use Permit request, following the presentation and discussion of the request, the Planning Commission may make a motion to approve the conditional use permit, approve the conditional use permit with any requested modifications, tabling the matter to a later date, or not approve the conditional use permit request with the appropriate findings of facts. The Planning Commission is the decision-making body for the conditional use permit request.

Title 10 Ordinance Guidelines (Code Reference)

This Final Subdivision and Site Plan review is regulated under City Code 10-21 “Subdivisions”, 10-25 “Development in All Zones” and is affected by City Codes 10-10A “Commercial Zones (C-1, C-2, C-3)”, 10-14 “Regulations Applicable to All Zones”, 10-15 “Parking, Loading Space; Vehicle Traffic and Access”, and 10-16 “Sign Regulations”.

The Conditional Use Permit review is regulated under City Code 10-19 “Conditional Uses” and if guided by City Code 10-10A “Commercial Zones (C-1, C-2, C-3)”.

The proposed development parcel is located west of Riverdale Road on property currently owned by Williamsen Riverdale 2 LLC. The property is located in a C-2 zoned area and the requested use of regional restaurant is a conditional use in this zone. As stated above, the property owner will need to secure a conditional use permit approval for this use on this property to move forward for final potential site approval.

Attached with this executive summary is a document entitled “Final Site Plan Review: Panera Bread. This is a supplementary document addressing items on the Final Site Plan application documents. Also attached, following this executive summary, are comments from the Public Works Director, the Police Chief, the Fire Department, and contracted City Engineer. The Planning Commission should discuss any concerns raised by these summaries.

Staff would encourage the Planning Commission to review this matter and then discuss with the petitioner concerns raised by staff and/or the Planning Commission. Staff would then recommend that the Planning Commission make a motion to approve the proposed Panera Bread Final Site Plan, approve the proposed final site plan with any requested modifications, tabling the matter to a later date, or not recommend Council approval of the proposed final site plan with the appropriate findings of facts.

For the Conditional Use Permit consideration, staff would encourage the Planning Commission to review the request documentation and then discuss with the petitioner any concerns raised by staff and/or the Planning Commission. Staff would then recommend that the Planning Commission make a motion to approve the conditional use permit, approve the conditional use permit with any requested modifications, tabling the matter to a later date, or not approve the conditional use permit request with the appropriate findings of facts.

General Plan Guidance (Section Reference)

The General Plan use for this area is currently set as “Planned Commercial - High” and this proposed project would comply with this land use.

Legal Comments – City Attorney

____
Steve Brooks, Attorney

Administrative Comments – City Administrator

____
Steve Brooks, City Administrator

10-19-5: BASIS FOR REVIEW OF CONDITIONAL USE PERMIT:

The planning commission shall review a conditional use permit with evidence presented to establish that:

A. A conditional use shall be approved if reasonable conditions are proposed or can be imposed to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards.

B. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the conditional use may be denied.

C. The proposed use of the particular location is necessary or desirable to provide a service or facility which will contribute to the general well being of the community; and

D. Such use will not, under the circumstances of the particular case and the conditions imposed, be detrimental to the health, safety and general welfare of persons nor injurious to property or improvements in the community, but will be compatible with and complementary to the existing surrounding uses, buildings and structures when considering traffic generation, parking, building design and location, landscaping and signs; and

E. The proposed use conforms to the goals, policies and conditions specified in this chapter for such use; and

F. That the proposed use conforms to the goals, policies and governing principles and land use of the master plan for the city; and

G. The proposed use will not lead to the deterioration of the environment, or ecology of the general area, nor will it produce conditions or emit pollutants of such a type or of such a quantity so as to detrimentally affect, to any appreciable degree, public or private property, including the operation of existing uses thereon, in the immediate vicinity or the community or area as a whole. (Ord. 665, 8-19-2008)

Riverdale City

Community Development
4600 So. Weber River Drive
Riverdale, Utah 84405
Acct #10-36-9000

CONDITIONAL USE PERMIT

APPLICATION

DATE 10/31/2023

ADDRESS OF SITE 4130 Riverdale Road, Riverdale, Utah 84405

APPLICANT'S NAME Russell Haight (Perigee Consulting)

ADDRESS 9089 S. 1300 W. #160, West Jordan, Utah 84088

PHONE NUMBER 801-651-6987

NOTE: Plans: Detailed location, site and building plans shall accompany the completed application forms provided by the city. For structures in existence, only a location plan need be provided.

✓ SITE PLAN RECEIVED ____ BUILDING PLANS RECEIVED

Present Zoning of the Property: C-2 Present Use of the Property: Retail

Acreage of the Property: 1.12 ac Width of Property on the Street: 162.25 ft

Proposed Conditional Use of Property: Restaurant

SIGNED: Russell Haight DATE: 10/30/2023

I authorize Russell Haight to act as my representative in all matters relating to this application.

OWNER

Russell D. Haig

AGENT AS AUTHORIZED BY OWNER

PLANNING COMMISSION SCHEDULED TO HEAR THIS APPLICATION FOR CONDITIONAL USE ON:

DATE: 11/14/2023 DECISION OF COMMISSION: ____

SIGNATURE OF CHAIRPERSON: ____ DATE: ____

PLANNING COMMISSION PUBLIC HEARING:

DATE: — DECISION OF COMMISSION: N/A

SIGNATURE OF CHAIRPERSON: N/A DATE: —

Fee $75.00 Date Paid: 10/31 **Receipt No.** 15.558558

RIVERDALE CITY CORPORATION
4600 SOUTH WEBER RIVER DRIVE
RIVERDALE UT 84405
394-5541

Receipt No: 15.558558
Oct 31, 2023

PERIGEE

Previous Balance:		.00
MISCELLANEOUS - COND USE PERMIT		75.00
10-36-9000 SUNDRY REVENUE		
Total:		75.00
CHECK	Check No: 2396	75.00
Total Applied:		75.00
Change Tendered:		.00

Duplicate Copy

10/31/2023 11:41 AM

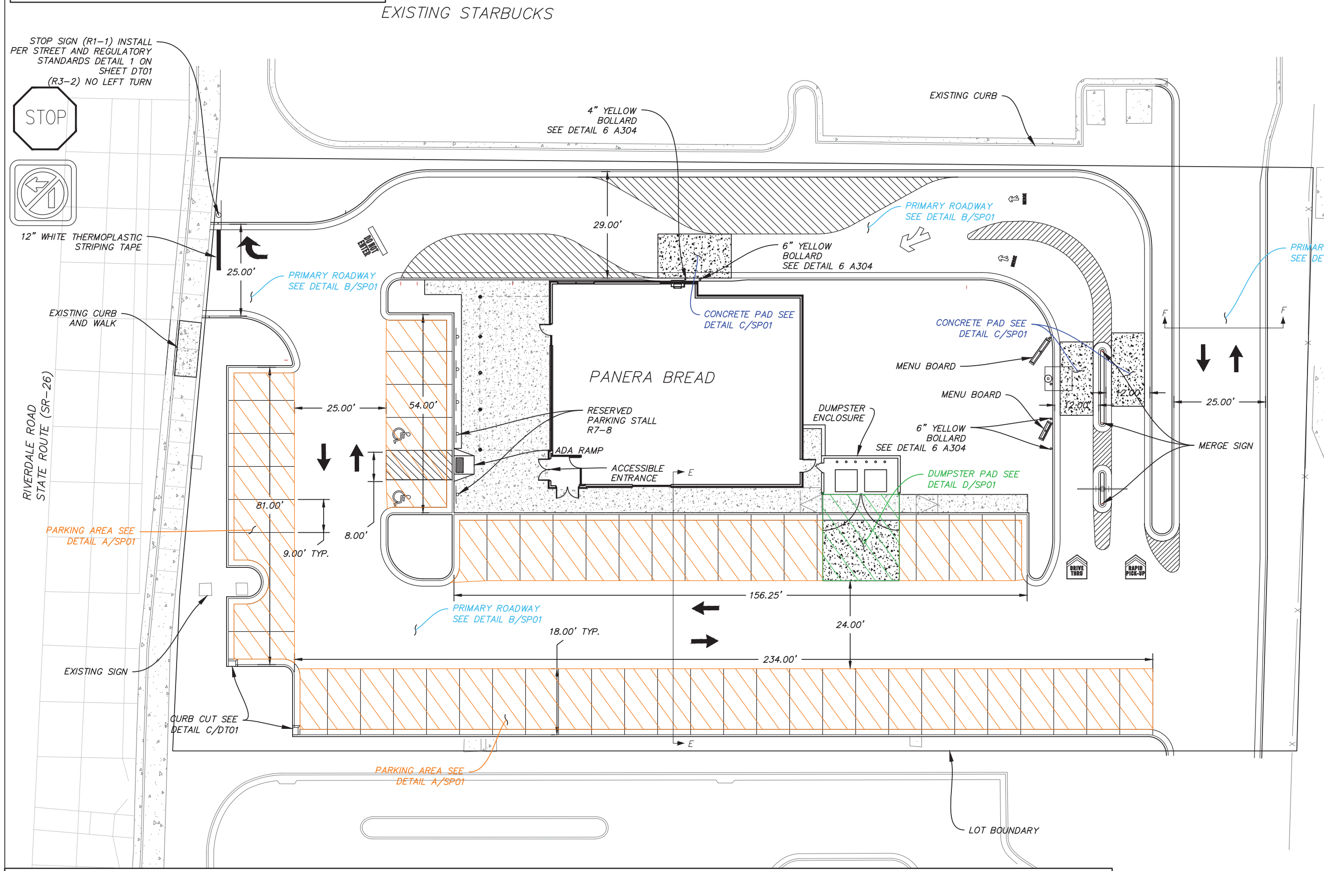
ROADWAY SECTION NOTES:

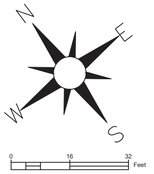
1. CONTRACTOR TO COMPLY WITH THE RECOMMENDATIONS PROVIDED BY GORDON GEOTECHNICAL REPORT (PROJECT # 748-002-23) FOR THIS PROJECT REGARDING SITE PREPARATION, GRADING, COMPACTION ETC.

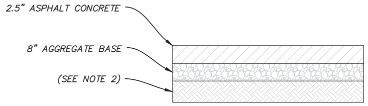
2. SEE GEOTECH REPORT FOR SUBSOIL PREPARATION.

3. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.

4. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS

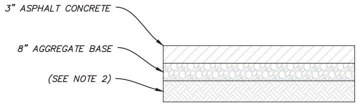

EXISTING STARBUCKS
STOP SIGN (R1-1) INSTALL PER STREET AND REGULATORY STANDARDS DETAIL 1 ON SHEET DT01
(R3-2) NO LEFT TURN
STOP
12" WHITE THERMOPLASTIC STRIPING TAPE
EXISTING CURB AND WALK
RIVERDALE ROAD STATE ROUTE (SR-26)
PARKING AREA SEE DETAIL A/SP01
EXISTING SIGN
CURB CUT SEE DETAIL C/DT01
PARKING AREA SEE DETAIL A/SP01
DO NOT ENTER
25.00'
PRIMARY ROADWAY SEE DETAIL B/SP01
25.00'
54.00'
81.00'
8.00'
9.00' TYP.
PRIMARY ROADWAY SEE DETAIL B/SP01
18.00' TYP.
4" YELLOW BOLLARD SEE DETAIL 6 A304
29.00'
6" YELLOW BOLLARD SEE DETAIL 6 A304
CONCRETE PAD SEE DETAIL C/SP01
PANERA BREAD
RESERVED PARKING STALL R7-8
ADA RAMP
ACCESSIBLE ENTRANCE
E
E
DUMPSTER ENCLOSURE
DUMPSTER PAD SEE DETAIL D/SP01
156.25'
24.00'
234.00'
PRIMARY ROADWAY SEE DETAIL B/SP01
EXISTING CURB
MERGE
MERGE
CONCRETE PAD SEE DETAIL C/SP01
MENU BOARD
MENU BOARD
6" YELLOW BOLLARD SEE DETAIL 6 A304
12.00'
12.00'
MERGE SIGN
DRIVE THRU
RAPID PICK-UP
F
F
PRIMARY ROADWAY SEE DETAIL B/SP01
25.00'
LOT BOUNDARY





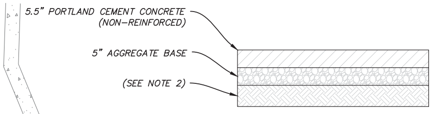
A SP01 PARKING AREAS (FLEXIBLE)

SCALE: N.T.S.



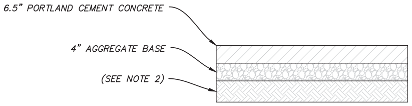
B SP01 PRIMARY ROADWAY AREAS (FLEXIBLE)

SCALE: N.T.S.



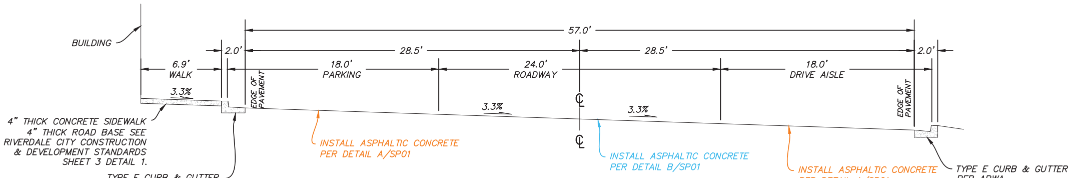
C SP01 PRIMARY ROADWAY AREAS (RIGID)

SCALE: N.T.S.



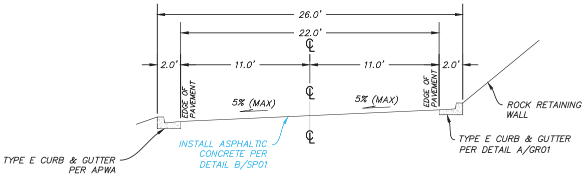
D SP01 DUMPSTER PAD (RIGID)

SCALE: N.T.S.


BUILDING
57.0'
2.0'
28.5'
28.5'
2.0'
6.9' WALK
18.0' PARKING
24.0' ROADWAY
18.0' DRIVE AISLE
EDGE OF PAVEMENT
EDGE OF PAVEMENT
3.3%
3.3%
3.3%
℄
℄
4" THICK CONCRETE SIDEWALK 4" THICK ROAD BASE SEE RIVERDALE CITY CONSTRUCTION & DEVELOPMENT STANDARDS SHEET 3 DETAIL 1.
TYPE E CURB & GUTTER PER DETAIL A/GR01
INSTALL ASPHALTIC CONCRETE PER DETAIL A/SP01
INSTALL ASPHALTIC CONCRETE PER DETAIL B/SP01
INSTALL ASPHALTIC CONCRETE PER DETAIL A/SP01
TYPE E CURB & GUTTER PER APWA

E SP01 PARKING LOT

SCALE: 1" = 5'


26.0'
22.0'
2.0'
11.0'
11.0'
2.0'
℄
℄
℄
EDGE OF PAVEMENT
EDGE OF PAVEMENT
5% (MAX)
5% (MAX)
ROCK RETAINING WALL
TYPE E CURB & GUTTER PER APWA
INSTALL ASPHALTIC CONCRETE PER DETAIL B/SP01
TYPE E CURB & GUTTER PER DETAIL A/GR01

F SP01 ACCESS ROAD

SCALE: 1" = 5'

CALL BEFORE YOU DIG! IT'S THE LAW BLUE STAKES 1 800 662 4111

PRELIMINARY - NOT FOR CONSTRUCTION

PERIGEE
CONSULTING
CIVIL • STRUCTURAL • SURVEY
9089 SOUTH 1300 WEST, SUITE 160
801.628.6004 TEL 801.590.6611 FAX
WEST JORDAN, UT 84088
WWW.PERIGEECIVIL.COM

RIVERDALE CITY

CITY ENGINEER DATE

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RN
DATE: OCTOBER 2023
REV:
DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\05 SP01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:15:39 AM

RIVERDALE CITY
PANERA BREAD
SITE PLAN

SHEET NUMBER
05
OF 21 SHEETS
DRAWING NAME
SP01

10/31/2023 8:15:39 AM

RIVERDALE CITY
PLANNING COMMISSION AGENDA
November 14, 2023

AGENDA ITEM: E1(b)

SUBJECT:	b. Consideration of recommendation to City Council regarding Final Site Plan proposal for Panera Bread Restaurant, located at approximately 4122 South Riverdale Road, Riverdale, Utah 84405 as requested by Perigee Consulting and Panera Bread Group.
PRESENTER:	Mike Eggett, Community Development
INFORMATION:	a. Exec Summ Panera Final Site Plan PC [20231114] b. Panera Final Site Plan Review – 20231108 c. Dept Staff Reports – Panera Final Site Plan PC [20231106] d. Panera City Eng Review letter #2 - 9 November 2023 e. Panera Bread Site Plan Update App – 20230829 f. 2023-10-31 Panera Response Sheet g. 2023-10-31 Panera Riverdale Storm Drain Letter h. 2023-08-29 Panera – Exterior Elevations i. 2023-08-29 Panera – Interior concept j. ALTA Survey 100422 by McNeil k. 2023-10-31 Panera Riverdale Construction Plans

BACK TO AGENDA

Planning Commission
Executive Summary

For the Commission meeting on: 11-14-2023	Petitioner: *Panera Bread and Perigee Consulting* represented by Russell Haight

Summary of Proposed Action

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As it relates to the Final Site Plan proposal, following the presentation and discussion of the proposal, the Planning Commission may make a motion to recommend City Council approve the proposed Panera Bread Final Site Plan, approve the proposed final site plan with any requested modifications, tabling the matter to a later date, or not recommend Council approval of the proposed final site plan with the appropriate findings of facts. If a final recommendation is provided, then this matter could move forward to a final site plan consideration review process with the City Council at a later date.

As it relates to the Conditional Use Permit request, following the presentation and discussion of the request, the Planning Commission may make a motion to approve the conditional use permit, approve the conditional use permit with any requested modifications, tabling the matter to a later date, or not approve the conditional use permit request with the appropriate findings of facts. The Planning Commission is the decision-making body for the conditional use permit request.

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The proposed development parcel is located west of Riverdale Road on property currently owned by Williamsen Riverdale 2 LLC. The property is located in a C-2 zoned area and the requested use of regional restaurant is a conditional use in this zone. As stated above, the property owner will need to secure a conditional use permit approval for this use on this property to move forward for final potential site approval.

Attached with this executive summary is a document entitled “Final Site Plan Review: Panera Bread. This is a supplementary document addressing items on the Final Site Plan application documents. Also attached, following this executive summary, are comments from the Public Works Director, the Police Chief, the Fire Department, and contracted City Engineer. The Planning Commission should discuss any concerns raised by these summaries.

Staff would encourage the Planning Commission to review this matter and then discuss with the petitioner concerns raised by staff and/or the Planning Commission. Staff would then recommend that the Planning Commission make a motion to approve the proposed Panera Bread Final Site Plan, approve the proposed final site plan with any requested modifications, tabling the matter to a later date, or not recommend Council approval of the proposed final site plan with the appropriate findings of facts.

For the Conditional Use Permit consideration, staff would encourage the Planning Commission to review the request documentation and then discuss with the petitioner any concerns raised by staff and/or the Planning Commission. Staff would then recommend that the Planning Commission make a motion to approve the conditional use permit, approve the conditional use permit with any requested modifications, tabling the matter to a later date, or not approve the conditional use permit request with the appropriate findings of facts.

General Plan Guidance (Section Reference)

The General Plan use for this area is currently set as “Planned Commercial - High” and this proposed project would comply with this land use.

Legal Comments – City Attorney

____
Steve Brooks, Attorney

Administrative Comments – City Administrator

____
Steve Brooks, City Administrator

Riverdale City

Community Development
4600 So. Weber River Drive
Riverdale, Utah 84405
801-394-5541

Preliminary Site Plan Review: Panera Bread, 4122 South Riverdale Road

Completed by Mike Eggett, Community Dev. Director on 11/8/2023

Recommendation: City staff recommends that the Planning Commission examine and review items associated with this proposed final site plan review. Items of consideration or note (if any) have been highlighted in yellow for potential discussion purposes. City staff recommends that the Planning Commission act accordingly to approve the final site plan or not approve the proposed Shake Shack final site plan with any additional comments, requirements or concerns to be addressed by the developer.

Date Plan Submitted to City: (Must be at least two weeks prior to Planning Commission meeting)	August 29, 2023 and October 31, 2023 (updated)
Date Application Submitted to City:	August 29, 2023
Date Fee Paid:	August 29, 2023 (see receipt for detail)
Site Plan – Preliminary Requirements	**Departmental Review Comments**
COVER SHEET	Provided
Title Block	
Project name and address	Project name and address location shown; please update site address to “4122 South Riverdale Road” to meet Weber County records for property
Property Owner’s name, address, and phone number	Williamsen Riverdale 2 LLC., this says “Thorn Wiliamson” and I believe this should be corrected to be “Thom Williamsen”, 801-364-2602; mailing address for group still not showing at this time and this needs to be added still (154 E. Myrtle Ave, Murray, Utah 84107)
Property Developer’s name, address, and phone number	Panera Bread, Attn: Peter Strang, it says “Peter Strange” and this needs to be corrected to the correct last name, mailing address still not showing at this time and this needs to be added still, 216-401-0030

Approving agency's name and address: Utility companies if applicable	Riverdale City, 4600 So. Weber River Drive, Riverdale, Utah 84405 (The zip code on the plans is incorrectly showing "84408" and this needs to be corrected to "84405"); also for Fire Department please change name from "Randy Koger" to "Jared Sholly"; other utility agencies name and contact info not provided, where applicable
Consulting Engineer's name, address, and phone number	Perigee Consulting, Attn: Jed Atherley, 9089 South 1300 West, Suite 160, West Jordan, Utah 84088, 801-590-6611
Licensed Land Surveyor's name, address, phone number, signature, and seal	McNeil Engineering, Attn: Dennis K. Withers, 8610 South Sandy Parkway, Suite 200, Sandy, Utah 84070, 801-255-7700; seal and signature provided for land surveyor
Date	Yes – October 31, 2023
Revision block with date and initials	Revision block shown and no notes yet
Sheet number and total sheets	Shown (21 total sheets), elevation plans and interior layout submitted as well; Sheet E1.1 is shown on the "Sheet List Table" as "Irrigation Details", this needs to be corrected to be "Site Photometric Plan"
General	
Street names	Yes – Riverdale Road
Layouts of lots with lot numbers	Yes, shown
Adjacent tract ownership and tax identification numbers	Shown on Alta Survey sheet
Scale (minimum 1"=50' to 1"=10')	Scale missing on cover sheet; otherwise scale is shown on other pages, 1"=20', 1"=32' and 1"=80'
North arrow	Yes
Existing easements, structures, and utility lines: Approval to cross, use, or relocate	Existing easements identified on Alta Survey sheet, existing structures currently on site shown on demo sheet, existing utility lines on site shown; unknown if there are approvals to cross, use, relocate utilities
Space for notes	Yes, provided
Contours	Yes, shown on survey sheets and grading plan
Public areas	Existing and planned sidewalks and curb/gutter shown on multiple sheets
Vicinity Map	
Street names	Yes

Site location	Yes
North arrow	Yes on main sheet
Scale	Still no scale identification shown for vicinity map on cover sheet, also no scale identification shown on cover sheet
Layout	
Landscaping (location and type with area calculations)	Yes, provided on sheets LI-101 to LI-502; landscaping area calculations shown to meet requirements of City Code 10-14-12(B.)(2.) not provided
Location of exterior lighting devices, signs, and outdoor advertising	Yes, location of existing lighting and signs shown on demolition plan; location of proposed onsite lighting devices shown on photometric plan; proposed signage locations shown using existing sign poles; architectural elevations and interior layout plan provided; planned building lighting provided on photometric plan
Location of underground tanks, dumpsters, etc	Location of retention tank provided on Sheet DR01; dumpster and dumpster enclosure location shown in packet on multiple sheets
Additional Information	
Benchmark	Shown and identified on Alta Survey sheets, defer to City Engineer
Basis of bearings	Shown and identified on Alta Survey sheets, defer to City Engineer
Legend	Shown on various sheets
PLAN AND PROFILE SHEETS	Site plan and profile sheets provided
Title Block	
Project name and address	Project name and address location shown
Approving Agency's name and address	Riverdale City, 4600 So. Weber River Drive, Riverdale, Utah 84405 (The zip code on the plans is incorrectly showing "84408" and this needs to be corrected to "84405"); also for Fire Department please change name from "Randy Koger" to "Jared Sholly";
Consulting Engineer's name, address, and phone number	Perigee Consulting, Attn: Jed Atherley, 9089 South 1300 West, Suite 160, West Jordan, Utah 84088, 801-590-6611
Date	Yes – October 31, 2023
Scale	Scale is not shown on cover page, but is shown on all other sheets

Revision block with date and initials	Revision block shown and no notes yet
Sheet number and total sheets	Shown (21 total sheets), elevation plans and interior layout submitted as well; Sheet E1.1 is shown on the "Sheet List Table" as "Irrigation Details", this needs to be corrected to be "Site Photometric Plan"
General	
North arrow	Yes
Street names	Yes, shown on cover sheet and shown on other sheets in packet – Riverdale Road and drive aisle accessway
Lot numbers	Yes, shown
Reference to sheets showing adjacent areas	Not applicable
Center line stationing	Shown on plans, where applicable
Existing natural ground	Shown on sheet GR01
Signage	Existing pole signage location shown and other site signage locations shown; some proposed building signage shown on architectural rendering sheet; may inquire more regarding future signage intent if desired
Height	Future final pole sign height is unknown; maximum of 40' allowed
Size	Pole sign size is unknown at this time; building signs sizing is unknown at this time
Locations	Some building signage concepts shown on arch drawing; Existing on site pole sign locations shown
Colors	Pole signage coloration and design not provided at this time
Lighting	Signage lighting unknown at this time
New and Existing Buildings	
Height and Size	New building - Height = approximately 20 feet at highest point; Building size = total 3800 sf
Location, setbacks, and all dimensions	Building setbacks provided; approximates: south setback – 67.20 ft at nearest point; north setback – 29 ft at nearest point; front (west) setback – 90 feet at nearest point; back (east) setback – 124.6 feet at nearest point
Type of construction	Materials for structure, texture, color appearance provided on architectural rendering; DRC will need to approve the building colorations and material, signage concepts, and landscape plan

Type of occupancy and proposed uses	Regional restaurant with drive thru access
Show handicapped access	ADA accessible ramp and access areas shown and handicapped parking stalls shown
New and Existing Landscaping & Percentage	Landscaping identified on sheet LP-101; Percentage of landscaping provided for site is 20% as shown on sheet LP-101 table, therefore landscaping plan meets minimum requirement of 20% or more landscaping coverage per City Code 10-14-12(B.)(2.)
Number of trees	13 trees, 157 shrubs, 177 ornamental grasses
Landscape plan showing all planting, hardscaping, berming, and watering	Planting, hardscaping shown; new site development requires gentle berming/screening locations, as required in 10-14-12 (B.)(2.) to screen drive thru and parking area from motorists along road; this is clearly identified on landscaping plan sheet, also shrub row screening is provided, irrigation plan provided
Xeriscaping alternatives being considered	Yes, xeriscaping seems to be applied in the rock mulch and ground cover areas of landscape plan; for more, inquire of the developer
New and Existing Walls and Fences	
Location, design, and height	Existing fence location shown; no new fences appear to be planned for site
Materials proposed for construction	No new fences planned for site
New and Existing Parking	
Location, area, and layout of off-street parking (size of stalls, regular and handicapped)	53 dedicated stalls are provided and shown and then drive-thru stacking location for 18 vehicles shown; handicapped parking space provided and shown; size meets city requirements
Location of employees' parking, customer parking, and handicapped parking	Established as shown in drawings; employee parking and customer parking appear shared
Internal circulation pattern	Internal circulation pattern identified
New and Existing Ingress and Egress	
Location and size of points of ingress and egress for motor vehicles and internal use	Yes, shown
Circulation pattern	Internal circulation pattern identified
New and Existing Streets	
All access points	Yes, this is shown
Center lines	Yes, this is shown

Right-of-way lines	Shown, dedicated right-of-way identified on Alta Survey sheet
Face of curb lines	Yes, this is shown
Centerline slope	Shown on drawings and established per previous and other project road development
Signing and striping	Public signing installation should be coordinated with public works dept and paid for by applicant, where applicable; roadway striping should be coordinated with public works, where applicable
Light poles	Yes, location of onsite proposed light poles and equipment shown in packet on photometric sheet
Street lights	Location of existing street light poles and power equipment shown on Alta Survey sheets; no newly proposed street light poles or devices appear to be planned
Street name signs	Location of street name signs on site not applicable to this location
Stop signs	Location of stop signs shown and identified
UDOT approval (if required for project)	This project has a compliance concern with UDOT approvals for the site; this is being discussed for resolution and applicant has submitted traffic study and variance from to UDOT for this access to remain open to Riverdale Road
Sidewalk (4' side with 4" of road base or 6' side with 6" of road base through the approach)	Yes, location shown and detail shown on sheet DT03
Planting Strip	There are no planting strips available along Riverdale Road for this project
New and Existing Storm Drainage	
Top of curb elevations	Shown on GR-01 and detail shown on sheet DT01
Slope of gutter	Shown on GR-01 and detail shown on sheet DT01
Manholes	No existing on site; new shown on multiple sheets
Invert elevations	Shown on GR-01 and detail shown on sheet DT01, defer to City Engineer
Length, size, slope, and type of mains and laterals	Shown on DR-01, in detail on sheets PP-01 to PP-03, defer to City Engineer
Location of catch basins	Shown on multiple sheets in packet
Ditches, location and ownership	No waterways or ditches located on this site or planned for this project
Approval to pipe, reroute or use	Other than future City approval, unknown if other approval required, defer to City Engineer

Calculations for retention system	Calculations for the retention system shown on sheet DR01 and also discussed in storm drain plan, defer to City Engineer
Method of storm water clean-up	This is discussed and outlined on sheet EC01 and in more detail in storm drain plan
New and Existing Sanitary Sewers	
Manholes	Existing shown on multiple sheets; new shown on multiple sheets
Invert elevations	Shown on UT-01, defer to City Engineer
Length, size, type, and slope of mains and laterals	Shown on UT-01, details provided on sheets DT01-DT04, defer to City Engineer
New and Existing Water Lines	
Length, size, type, and slope of mains and laterals	Shown on UT-01, details provided on sheets DT01-DT04, defer to City Engineer
Location, size, and type of water meters, valves, and fire hydrants	Shown on UT-01, water meter location and size shown, type identified on sheet DT02; Location of existing valves shown; Location of new valves shown; existing fire hydrants on site shown; no new hydrants planned for this site plan
New and Existing Gas Lines	
Size and type	Existing gas lines shown on Alta Survey; note of "coordinate gas meter relocation with owner" shown on sheet DM01
New and Existing Electrical Lines	
Size, location, and type	Existing power lines shown on multiple sheets; new lines location, size, and type not shown or identified in notes
Location of power poles	Existing power poles and overhead lines location shown on multiple sheets; new power poles location not planned
New and Existing Telephone Lines	
Location of poles, junction boxes, and manholes	Existing location of telephone lines shown on multiple sheets, new telephone utility lines location not shown or identified in notes
New and Existing Cable TV Lines	
Location of lines (if applicable)	Existing location of communication lines shown, where applicable; new cable TV/fiber optic lines not shown or identified in notes, where applicable
DETAILED DRAWINGS	
Cross section of roadway (minimum 8" road base and 3" asphalt)	Roadway/accessway cross sections provided on sheets SP01

Cross section of curb and gutter (standard 30" high back)	This is shown on sheet DT01, defer to City Engineer
Gutter inlet box with bicycle safe grate	Details provided on sheet DT02, locations identified on multiple sheets; gutter inlet boxes identified as having bicycle safe grates; defer to City Engineer
Cleanout box	Shown on sheet DR01 and details provided on sheet DT02; defer to City Engineer
Thrust blocking	None showing and may not be applicable; defer to City Engineer
Special energy dissipating or drop manholes	None showing and may not be applicable; defer to City Engineer
ADDITIONAL INFORMATION	
Soils report	Geotechnical report has been provided as completed by Gordon Geotechnical Engineers, Inc on March 22, 2023 for this site
Drainage and runoff calculations	Calculations for the retention system shown on sheet DR01 and also discussed in storm drain plan, defer to City Engineer
Water right transfer documentation	Applicant needs to work with Public Works Department to provide adequate water rights for this site per 8-6-3 of City Code
Copy of protective covenants, codes, and regulations for development	No CCR's know to apply to this project
Three (4) total 11" X 17" copies of plan drawings, one large full set of plan drawings, and one digital full set copy of plan drawings	Yes, provided as requested
Building elevation renderings	Provided with packet and interior plans as well
Corp of Engineers approval (if required)	Located outside of the 0.2% annual floodplain; no approval req.
Zoning compliance	Yes, Community Commercial (C-2) Zone meets intended uses for site design; Conditional Use Permit app submitted for consideration by PC in meeting C-2 zoning requirements
RDA compliance (if applicable)	No applicable RDA regulations for this project area; this is located in the 550 West RDA area
Use compliance	Yes, this use complies with the zoning for this C-2 zoned area; Conditional Use Permit app submitted for consideration by PC in meeting C-2 zoning requirements
Engineering comments and letter of approval recommendation	Engineering comments, along with Public Works, Police Department, Fire Department provided

Traffic study	This is being negotiated and worked on by applicant group, staff, and associated project design group in resolving concerns of UDOT, traffic study has been submitted with variance request to UDOT with anticipation to receive final UDOT determination for accessway continued use
All Planning Commission and City Staff conditions for approval have been met	Currently Final Site Plan recommendation submittal consideration being reviewed by Planning Commission

DEPARTMENTAL STAFF REPORTS – 11/2/2023 to 11/8/2023

From: Shawn Douglas
Sent: Wed 11/8/2023 3:11 PM
To: Mike Eggett
Subject: Panera

Mike,

I have included my review comments for Panera. Thanks

Plan Review For Panera

Storm Water

1-Drainage system operation and maintenance plan. Plan needs to be labeled as Panera. Maintenance requirement plan sheet needs to list specific items and cleaning frequencies. The plan needs to include a training log.
2-Detail plan for orifice structure.
3-Storm water prevention plan for construction site including BMP's. Plan needs to include concrete washout, restroom, and dumpster.
4-Injection well permit.
5-Storm water calculations need to be based on 100 Year storm.

Shawn Douglas
Riverdale City Public Works
801-394-5541 ext 1217
Sdouglas@Riverdalecity.com

From: Casey Warren (Police Chief)
Sent: Thu 11/2/2023 11:06 AM
To: Mike Eggett
Subject: Re: Traffic Impact Study document for Updated review comments needed for Panera Bread Site Plan resubmit

Mike,

It'd be nice to add the RIRO access if udot will allow it on sr26 south of 300 w. Between that access, 300 w and kanes access road if it cuts through there should be plenty of access and shouldn't be a problem. I don't see any other input to offer on the plans.

Thanks

Casey

Chief Casey Warren
Riverdale Police Department
4580 S. Weber River Dr.
Riverdale, UT 84405
(801)394-6616
cwarren@riverdalecity.com

From: Jared Sholly
Sent: Mon 11/6/2023 12:56 PM
To: Mike Eggett
Subject: RE: Traffic Impact Study document for Updated review comments needed for Panera Bread Site Plan resubmit

I have no issues on my end.

Thanks,

Jared Sholly
Fire Chief
Riverdale City Fire Department
jsholly@riverdalecity.com
801-394-7481 Office
801-628-6562 Cell

CIVIL ENGINEERING CONSULTANTS, PLLC.

5141 South 1500 West
Riverdale City, Utah 84405
801-866-0550

9th November 2023

Riverdale City
4600 South Weber River Drive
Riverdale, Utah 84405

Attn: Mike Eggett, Community Development Director/RDA Deputy Executive Director
Proj: **Panera Bread**
Subj: Preliminary Site Plan Review

Dear Mike,

I have completed my review of the above referenced subdivision and submit the following comments for your consideration:

As the Subdivision moves forward - Please request the Developer or his Engineer, submit a response letter with their re-submittal of drawings answering all Engineering review comments contained herein.

1. An **electronic copy** of the final Improvement Drawings and Details must be submitted to the Public Work Department for record keeping via. our office, upon design completion and prior to approval of the final drawings from our office.

Improvement Drawings

2. Riverdale Road needs to be labeled as a State Route (SR-26).

3. Design and details need to be shown for all retaining walls. Please provide a wall design to ensure that the grades/elevations transition into the existing ground and walls. The property to the east (Greenhill Apartments) needs to have clarified what work needs to be completed. Installing a wall will most likely require material to be excavated to the east and will have to be restored and accepted by the adjacent owners.

4. There is a water meter at the north property corner along Riverdale Road that was connected to the existing building. That line will need to be shown to be disconnected at the main waterline in Riverdale Road.

5. On the south property line adjacent to the existing building there appears a manhole (irrigation) with concrete lid. Need to verify the line is abandoned and may need to be removed. It appears on google as it continues westerly to an irrigation box. Need to verify

if this line is used for irrigation/storm water? Does it continue to the east? It is not shown on the ALTA.

6. The access to the south property appears may not happen as said property has been completely landscaped. Adjust plans accordingly.

7. Need to show existing elevations of adjacent properties as the design is interconnected.

8. The storm water calculations are shown for a 50-year storm event and needs to be done for a 100-year storm event. Update calculations as required for detention/retention areas.

9. The basin calculations need the areas switched (CDA1 and CDA2)

10. The volume of the basin to the east (landscaped area) seems approximately double of what we have calculated.

11. The underground storm water system and hydrodynamic separator needs to have the elevations for installation.

12. The orifice plate is shown with a size and elevation but how and what is it installed into. Need to have accessibility to maintain.

13. The are no elevations along the tbc/sidewalk on Riverdale Road. Please show to ensure the driveways and grades are correct. Check the grading on the landscape strip behind the sidewalk to ensure minimal runoff onto the sidewalk or create a small swale.

14. Both the ALTA and Survey drawings have several spelling errors. The bearings need to make sure that the degrees, minutes, and seconds symbols are placed correctly.

If you have any questions, feel free to contact our office.

Sincerely,
CEC, Civil Engineering Consultants, PLLC.

R. Todd Freeman

R. Todd Freeman, S.E., P.E.
City Engineer

Cc. Shawn Douglas, Public Work Director
Jeff Woody, Building Official

Riverdale City

Community Development
4600 So. Weber River Drive
Riverdale, Utah 84405
Acct #10-34-1500

RIVERDALE CITY PLANNING COMMISSION
APPLICATION FOR COMMERCIAL OR MANUFACTURING SITE PLAN APPROVAL

CASE NO: 2023-07 DATE SUBMITTED: 8/29/2023

APPLICANT'S NAME: Jed Atherley- Perigee Consulting

BUSINESS ADDRESS: 9089 S 1300 W Suite 160 West Jordan, UT 84088

BUSINESS PHONE: 801-910-3395

ADDRESS OF SITE: 4130 Riverdale Rd, Riverdale, UT 84405

APPLICANT'S INTEREST: Panera- Restaurant

Application is hereby made to the Riverdale City Planning Commission requesting that the following permitted use, be approved on 1.1 Acre (sq. ft./acreage) of property in the C-2 zone in accordance with the attached site plan.

Signature of Applicant

Mgr. Williamsen Riverdale 2 LLC
Signature of Property Owner

I authorize Jed Atherley to act as my representative in all matters relating to this application.

Mgr. Williamsen Riverdale 2 LLC
Signature of Property Owner

NOTE: A fee will be charged at the time the site plan is submitted for review - $400 per acre or portion of

Fee: $ 800.00 Date paid: 8/29/2023

Planning Commission set public hearing: Yes ☐ No ☑ Date of Public Hearing: N/A

Planning Commission scheduled to hear this application for site plan approval on:

Date: Prelim. 9/12/2023; Final 11/14/2023 Decision of Commission: Prelim approved;

City Council set public hearing: Yes ☐ No ☑ Date of Public Hearing: N/A

City Council scheduled to hear this application for site plan approval on:

Date: Decision of Council:

RIVERDALE CITY CORPORATION
4600 SOUTH WEBER RIVER DRIVE
RIVERDALE UT 84405

394-5541

Receipt No: 15.557572

Aug 29, 2023

PERIGEE

Previous Balance:	.00
BUILDING PERMITS - BUILDING PERMIT 10-32-2100 BUILDING PERMITS	800.00
Total:	800.00
CHECK Check No: 2384	800.00
Total Applied:	800.00
Change Tendered:	.00

Duplicate Copy

08/29/2023 4:24 PM

Panera Riverdale Response

Commentor	Comment sheet	Comment	Response
Mike Eggett - Community Dev.			
	Cover Sheet	Williamsen Riverdale 2, LLC; address and phone number unknown at this time; all owner information not shown on cover sheet, this needs to be updated and added.	Contact added to cover sheet.
	Cover Sheet	Developer name, address, and phone number unknown at this time; all developer information not shown on cover sheet, this needs to be updated and added.	Added to TC01
	Cover Sheet	Riverdale City 4600 So. Weber River Drive, Riverdale, Utah 84405 (this needs to be added to cover sheet as well) ; Other utilties agencies name and contact info not provided, where applicable	Added to TC01 as a contact
	Cover Sheet	Seal and signature not provided for land surveyor, where applicable	See added survey sheets.
	General: Adjacent tract ownership and tax identification number	Tract ownership names and tax ID not shown and needs to be provided on cover or other interal sheet	See added survey sheets.
	Cover sheet?	Existing easements not clearly identified, existing utilities currently ons ite shown on demo sheet, no existing utility lines on site shown; unknown if there are approvals to cross, use relocate utilities	Topo and Alta added. Additional callouts added to sheets to existing utilities
	Cover sheet : Vicinity Map	No North Arrow	Added to TC01
	Cover sheet: Vicinity map	No scale identification shown	Added to TC01
	Cover sheet : Additional Information	Benchmark Not shown or identified, defer to City Engineer	Survey Sheet added to plan set See survey Sheet
	Cover sheet : Additional Information	Basis of bearings Not shown or identified, defer to City Engineer	Survey Sheet added to plan set See survey Sheet
	Plan and profile sheets : Title Block	Approving Agency's name and address: Riverdale City, 4600 So. Weber River Drive, Riverdale, Utah 84405 (This needs to be added to cover sheet)	Added as contact to cover sheet
	Plan and profile sheets : Signage Height	Future final pole sign height is unknown; maximum of 40' is allowed	More information to be in DRC
	Plan and profile sheets : Signage Size	Pole sign size is unknown at this time; buildingsigns sizing is unknown at this time	More information to be in DRC
	Plan and profile sheets : Signage Colors	Pole signage coloration and design not provided at this time	More information to be in DRC
	Plan and profile sheets : Lighting	Signage lighting unknown at this time	More information to be in DRC
	Plan and profile sheets : Type of construction	DRC will need to approve the building colorations and material, signage concepts, and landscape plan	More information to be in DRC
	Plan and profile sheets : Landscape plan showing all plnating, hardscaping, berming, and watering	new site development requires gentle berming/screening locations, as required in 10-14-12 (B.)(2.) to screen drive thru and parking area from motorists along road, which is not clearly identified in landscaping plan or other plan drawings, although shrub row screening appears to have been provided,	See landscape plans. Note added for berm

	Plan and profile sheets : New and existing streets right-of-way lines	shown, dedicated right-of-way not clearly identified	See added Alta. Only easment is near Riverdale Road
	Plan and profile sheets : New and existing streets street lights	Location of existing street light poles and power equipment not shown	See added survey sheets.
	Plan and profile sheets : New and existing streets stop signs	Location of stop signs, if any on site, not shown and identified, where applicable	Stop sign added to Riverdale Road entrance see SP01
	Plan and profile sheets : New and existing streets UDOT approval (if required for project)	This project has a compliance concern with UDOT approvals for the site; this is being discussed for resolution	Have submitted Traffic study and variance form to UDOT
	Plan and profile sheets : New and existing streets Sidewalk (4' side with 4" of road base or 6' side with 6" of road base through the approach)	but no details of widths to verify meets standards	General notes added and Detail sheet 3 from Riverdale city construction & Development Standards.
	Plan and profile sheets : New and existing storm drainage top of curb elevations	Shown on GR-01, no detail sheets provided	Detail sheets added.
	Plan and profile sheets : New and existing storm drainage slope of gutter	Shown on GR-01, no detail sheets provided	Details added to DT01 and DT02
	Plan and profile sheets : New and existing storm drainage invert elevations	Shown on GR-01, no detail sheets provided	Detail sheets added.
	Plan and profile sheets : New and existing storm drainage calculations for retention system	Calculations for the retention system have not been provided yet	See DR01 and strom drain letter.
	Plan and profile sheets : New and existing storm drainage method of storm water clean-up	This is unknown at this time; no storm water clean-up has been provided for project	Storm drain management plan provided with this submittal
	Plan and profile sheets : New and existing sanitary sewers Length, size, type, and slope of mains and laterals	no detail sheets provided	Called out on UT01. No main to profile. Details added to DT01 and DT02.
	Plan and profile sheets : New and existing water lines Length, size, type, and slope of mains and laterals	no detail sheets provided	See DT01 and DT02
	Plan and profile sheets : New and existing water lines Location, size, and type of water meters, valves, and fire hydrants	type not identified	See DT01 and DT02
	Plan and profile sheets : New and existing gas lines Size and Type	Existing gas lines not shown or identified; new lines location, size, and type not shown or identified in notes, where applicable	See Alta and Topo Sheet. Callout added to demo sheet to coordinate gas meter with owner.
	Plan and profile sheets : New and existing electrical lines Size, location, and type	Existing power lines not shown or identified; new lines location, size, and type not shown or identified in notes, where applicable	See survey sheet and callouts added to sheets.
	Plan and profile sheets : New and existing electrical lines Location of power poles	Existing power poles and overhead lines location not shown;	See Alta and Topo Sheet

	Plan and profile sheets : New and existing telephone lines Location of poles, junction boxes, and manholes	Existing location of telephone lines not shown, new telephone utilitiy lines location not shown or identified in notes	See Alta and Topo Sheet
	Plan and profile sheets : New and existing cable TV lines location of lines (if applicable)	Cable TV/Fiber optic lines not shown or identified in notes, where applicable;	No bluestakes when requested.
	Detailed drawings : Cross section of roadway (minimum 8" road base and 3" asphalt)	No roadway cross section connection to curb, gutter, and sidewalk areas provided to verify meeting standard	Cross sections added to SP01
	Detailed drawings : Cross section of curb and gutter (standard 30" high back)	This has not been provided	Curb Detail added to DT01 Callouts on GR01
	Detailed drawings : Gutter inlet box with bicycle safe grate	No detail drawings provided, gutter inlet boxes not identified as having bicycle safe grates;	Detail added to DT02. Callouts added to DR01 Sheet
	Detailed drawings : Cleanout box	No detail drawings provided, locations not identified, if any;	Detail added to DT02. Callouts added to DR01 Sheet
	Additional information : Drainage and runoff calculations	Drainage and runoff calculations for site have not been provided yet	See DR01 and strom drain letter.
	Additional information : Water right transfer documentation	Applicant needs to work with Public Works Department to provide adequate water rights for this site per 8-6-3 of City Code	Working to purse a development agreement to get water. Working with Steve Brooks.
	Additional information : Zoning compliance	Conditional Use Permit needs to be submitted and reviewed for approval by PC in meeting C-2 zoning requirements	Form Submitted
	Additional information : Use compliance	Conditional Use Permit needs to be submitted and reviewed for approval by PC in meeting C-2 use requirements	Form Submitted
Shawn Douglas - Riverdale City Public Works			
	Storm Water - 1	Drainage system operation and maintenance plan and BMP's approved and recorded with plat.	See SDMP
	Storm Water - 2	Orifice size, location and plan detail, free board on detention/retention structure, free board on structure, and emergency overflow.	Orfice 2.7". Strom Drain designed per UDOT standards with 100yr overflow path.
	Storm Water - 3	Hydraulic separator for BMP's to treat storm water before water enters underground retention/detention or city system.	CDS unit to be used to treat storm water before entering Underground Gallery.
	Storm Water - 4	Provide proposed flows gpm/gpd.	0.22cfs for the 10yr 24hr strom per udot standards
	Storm Water - 5	Storm water prevention plan for construction site including BMP's. All storm water instpections will need to be completed on Compliance Go.	SWPPP Has not been completed yet. Erosion Control sheet added to plan that will be a part of SWPPP submital.
	Storm Water - 6	Notice of intent filed with state.	See response above.
	Storm Water - 7	Note to certify retention/detention structure size after construction.	Note Added to DR01
	Storm Water - 8	Retention/Detention structure design and materials shown.	See DT04 For Detail of Gallery
	Storm Water - 9	Injection well permit.	Rough Draft of Form Provided as PDF
	Water - 1	Meter box and service line design as per Riverdale City standards.	Detail and callout added.

	Water - 2	Provide water usage peak demands.	Domestic Demand 60 gpm and 1600 GDP Fire Demand 525 gpm See landscape drawings for irrgation needs
	Water - 3	Provide what water shares will be used to meet water requirements.	Panera is to reach out to Steve Brook to purse a development agreement with the city.
	Water - 4	Provide valve at mainline tee for fire line and material type in right way needs to meet Riverdale City standards.	Valve added to UT01. Detail added to DT02
	Water - 5	Water lines need to be hot tapped.	Callout added to UT01
	Streets - 1	Traffic impact study if required by UDOT.	To be provided
	Sewer - 1	Proposed sewer flows daily and peak. Including peak demand time.	Same as water.
	Sewer - 2	Show existing sewer mains and laterals.	See 06 UT01
	Sewer - 3	Abandoned sewer lines will need to be capped at the property line.	See general note added to demo sheet.
	Sewer - 4	A will serve letter from Central Weber Sewer Improvement District needs to be provided	Reqest Sent
	Other - 1	Note requiring all construction and materials shall meet Riverdale City standards.	General note added to sheets.
	Other - 2	Note requiring all missing, nonfunctioning, and or damaged surface improvements shall be replaced. (sidewalk, curb and gutter, fencing, etc.)	General note added to sheets.
	Other - 3	Dimensions and square footage of each lot.	Alta added see second sheet.
	Other - 4	Square footage of impervious surface for each lot.	37,938 sq ft. See GR01
R. Todd Freeman - Riverdale City Engineer			
	Improvement Drawings - 1	An **electronic copy** of the final Improvement Drawings and Details must be submitted to the Public Work Department for record keeping via. Our office, upon design completion and prior to approval of the final drawings from our office.	Noted.
	Improvement Drawings - 1	A "General Note" need to be placed on the "Improvement Drawing" pages stating the following: - All deteriorated, damaged or missing surface improvements surrounding the perimeter of the development will need to be replaced or installed, i.e., curb and gutter, sidewalk, landscaping park strip improvements, street lights, fencing, etc.	Noted added as general to all imporvement sheets.
	Improvement Drawings - 2	All materials and slopes for pipelines must be called out on the drawings.	See UT01, DR01, and PP sheets for callouts.
	Improvement Drawings - 3	Riverdale Road needs to be labeled as a State Route (SR-26) as well.	Updated
	Improvement Drawings - 4	Design and details need to be shown for all retaining walls.	The retaining wall at the rear of the property wall will be a block wall. Coordinating with contractor to get designed/pick style.
	Improvement Drawings - 5	need to show all existing utilities (water, sewer, storm drain) and if they are being removed show them being disconnected at the main line.	See demo sheet (DM01) for callout and general note for existing utilites to be capped at the main.

	Improvement Drawings - 6	The proposed cross access roadway on the east side of the property will need to have a cross access agreement prepared as required.	Working to keep front access with UDOT. Poperty owner to the south doesn't want to have the access raod continue through.
	Improvement Drawings - 7	Details are called out on sheets that have not been included in the submittal. Please ensure that al sheets referenced are included in the submittal.	Detail Sheet added.
	Improvement Drawings - 8	Minimum sewer lateral for commercial developmnet is 6" diameter.	Pipe Size updated
	Improvement Drawings - 9	The fire line is shown as a 4" fire line. The Fire Marshall will need to review and approve.	Received Fire Marshel Approval with Submittal.
	Improvement Drawings - 10	The curb and gutter needs to show the grades to ensure no puddling. It appears there are a few locations where the grade is sloping away from the catch basins.	Grading tags updated.
	Improvement Drawings - 11	Check spelling "APWA" not "APAW"	Fixed
	Improvement Drawings - 12	Ensure handicap ramps have appropriate landings before and after.	Grading updated to show landing
	Improvement Drawings - 13	Need to show existing elevations of adjacent properties as the design is interconnected.	See sheet GR01 for existing curb elevations.
	Improvement Drawings - 14	Ensure the design of the east cross access roadway is connected to the existing grades appropriately and not to discharge storm water onto adjoining properties.	Between North East property and Panrea high point to be constructed at lot line. Between South West property and parna a low point is to be constructed 5' from lot line on Panera side.
	Improvement Drawings - 15	Need to have storm water design calculations to show the correct detention/retention basin sizing. The underground storm water system needs to have details and locations for access for maintenance. Need to have orifice size for discharge Into the storm water system.	See DR01 and strom drain letter.
	Improvement Drawings - 16	Storm water needs to be treated prior to an underground detention/retention system.	CDS unit to be installed upstream of gallery.
	Improvement Drawings - 17	This method of underground storm water storage is a "Class V - Injection Well System" and must receive approval from the "State of Utah" and the approval permit must be submitted to Riverdale City for record keeping.	Draft of Form sumbitted as pdf for review.
	Improvement Drawings - 18	A storm water maintenance plan will need to be developed and submitted for review.	SDMP has been submitted for review.
	Improvement Drawings - 19	Observation manholes (4' diameter) will be required on both ends of the underground isolation roll.	No Isolation Roll privided. Will have a CDS unit before Gallery.

PERIGEE
CONSULTING
CIVIL • STRUCTURAL • SURVEY

October 31, 2023

Riverdale City
4600 South Weber River Drive
Riverdale, Utah 84405

To Whom it May Concern,

The purpose of this letter is to provide you with information concerning the storm drain calculations and design as it relates to the construction of the Panera Bread restaurant at 4130 Riverdale Road.

We used the SCS method to determine the runoff from the 1.12-acre site. We used the 50 year, 24-hour storm depth from the NOAA Atlas 14. The 50-year rainfall depth is 2.87 inches. The weighted curve number was calculated to be 92 for the watershed. Autodesk's Storm and Sanitary Analysis was used to estimate the runoff from the site in the 50-year design storm and the required detention volume with the allowed release rate of 0.2 cfs/acre for the 10yr 24hr storm event, or 0.22 cfs.

The total runoff volume from the watershed was estimated to be 8,670 cubic feet in the 50-year storm. The detention volume required was calculated to be 5,216 cubic feet. 75 linear feet two barrels wide of 60" CMP pipe is sufficient to detain the 4,000 cubic feet and a retention pond in the landscaped area retains 1216 cubic feet. Discharge from the pipe will be though a 2.7" orifice that acts as the discharge control for the detention Gallery. Orifice invert is to be at 4355.85. This is 2' above the floor of the gallery ensuring that

The Water Quality Report is attached to this letter, detailing how 100% of the 80th percentile volume is retained on-site. With WQR report is an exhibit of how stormwater exceeding the 50yr 24hr event is safely conveyed to an acceptable location Riverdale Road. The orifice of the gallery is to be placed 2 feet above the floor of the gallery to provide the required retention volume from CDA 2 of 1,458 cubic feet.

If you have any questions regarding this, please let me know.

Best Regards,

Tyler White, PE

Panera Bread - Storm Water Quality Report

Date: 10/31/2023

Project Name: Panera Bread

Project ID: ______

Design Engineer: Russell Haight

Is the project within a watershed that is 303(d) listed? No

If yes:

Name of receiving water(s): ______

Listed Impairment(s): ______

Does the watershed that has an approved TMDL? ______

If yes:

Approved TMDL(s): ______

I have reviewed the storm water quality design and find this report to be complete, accurate, and current.

[name], Project Manager

[name], Designate Storm Water Coordinator

[name], Head of Maintenance

[stamp required at final design phase]

[name], Landscape Architect or Equivalent

Project Information

80th Percentile Storm Depth (in): 0.6

New Development

Area of Land Disturbance (ac): 1.1155

Project Impervious Area (ac): 0.87

Project Imperviousness (%): 78

Project Volumetric Runoff Coefficient, R_V: .689

80th Percentile Volume (cf): 1,675

Predevelopment Hydrologic Condition (cf): 2,161

Project Volume Retention Goal, V_{goal} (cf): 1,675

Redevelopment

Existing Project Impervious Area (ac): ______

Proposed Project Impervious Area (ac): ______

Change in Impervious Area (%): ______

If change in impervious area > 10%:

Existing Project Conditions

Imperviousness (%): ______

Volumetric Runoff Coefficient, R_V: ______

80th Percentile Volume, V_1 (cf): ______

Proposed Project Conditions

Imperviousness (%): ______

Volumetric Runoff Coefficient, R_V: ______

80th Percentile Volume, V_2 (cf): ______

$V_{goal} = V_2 - V_1 =$ ______

Subsurface Information

Groundwater

Depth to Groundwater (ft): 17.7

Historical High Depth to Groundwater if known (ft): _______

Source: Geotoech Report

Groundwater Contamination at Site: None

Soil Information

Infiltration Rate (in/hr): _________

Hydrologic Soil Group: __________

Source: _______________________

Soil Contamination at Site: ___________

Drinking Water

Within Drinking Water Source Area Protection: __No______

Additional Relevant Site Information

LID Drainage Areas

Add additional rows as needed.

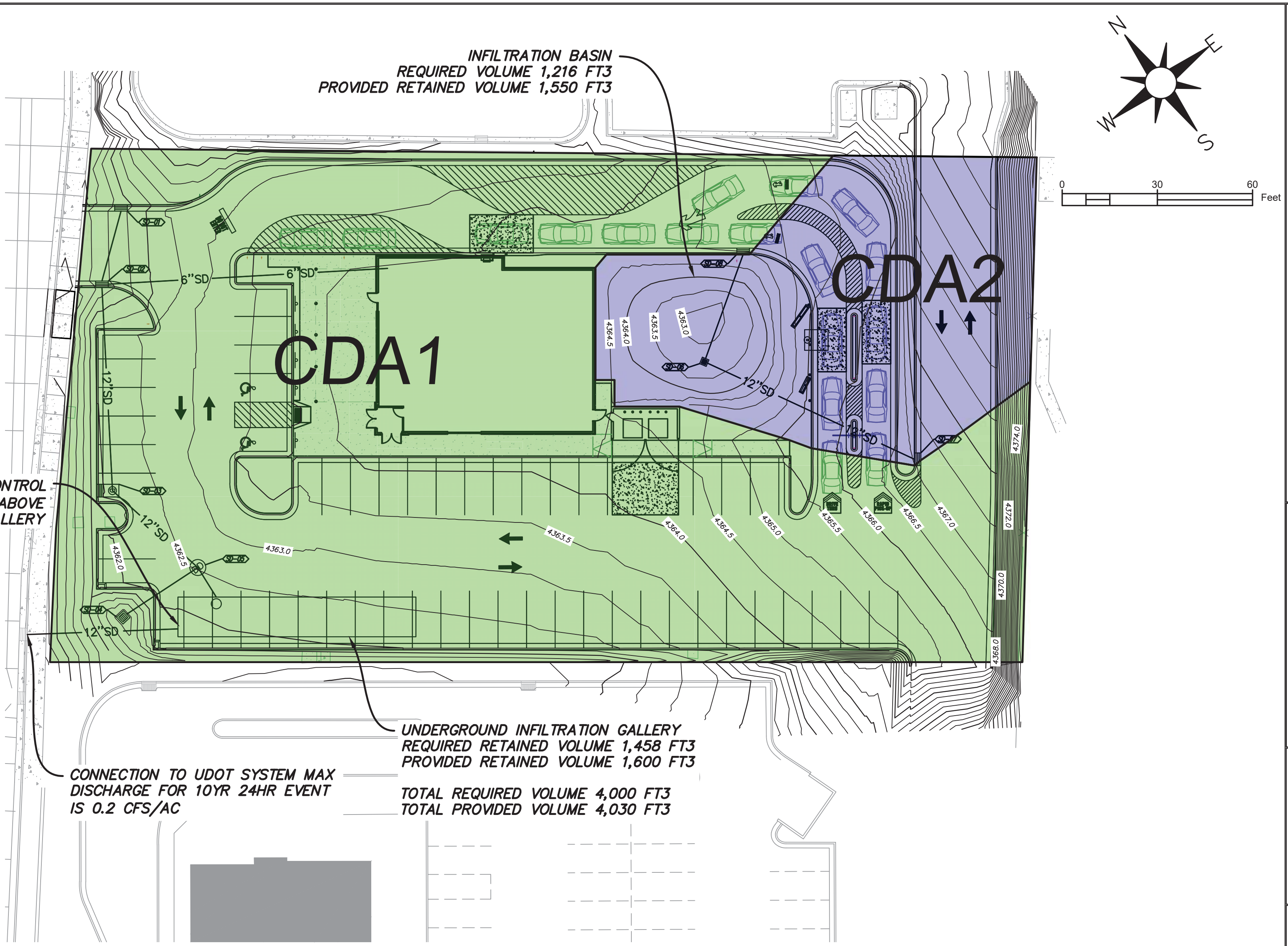
Contributing Drainage Area	Area (ac)	Impervious Area (ac)	Imperviousness (%)	Volumetric Runoff Coefficient, R_V	Water Quality Volume, WQV (cf)
CDA 1	0.23	0.115	50	0.43	217
CDA 2	0.89	0.755	85	0.75	1,458
CDA 3					
CDA 4					
				Total WQV (cf)	**1,675**

LID BMP Design

Add additional rows as needed.

Contributing Drainage Area	LID BMP Type	Water Quality Volume, WQV (cf)	Runoff Retained (cf)	Percent of Runoff Captured (%)
CDA1	Infiltration Basin	943	217	100
CDA 2	Underground Infiltration Gallery	1,600	1,458	100
CDA 3				
CDA 4				
		Total Volume Retained (cf)	1,675	100

Percent of V_{goal} captured by LID BMPs: ___100___%



INFILTRATION BASIN
REQUIRED VOLUME 1,216 FT3
PROVIDED RETAINED VOLUME 1,550 FT3

2.7" ORIFICE TO CONTROL
DISCHAREGE 2' ABOVE
FLOOR OF GALLERY

UNDERGROUND INFILTRATION GALLERY
REQUIRED RETAINED VOLUME 1,458 FT3
PROVIDED RETAINED VOLUME 1,600 FT3

TOTAL REQUIRED VOLUME 4,000 FT3
TOTAL PROVIDED VOLUME 4,030 FT3

CONNECTION TO UDOT SYSTEM MAX
DISCHARGE FOR 10YR 24HR EVENT
IS 0.2 CFS/AC

PANERA RIVERDALE
STORM DRAIN EXHIBIT

PERIGEE
CONSULTING
CIVIL • STRUCTURAL • SURVEY

9089 SOUTH 1300 WEST, SUITE 160
WEST JORDAN, UT 84088
801.628.6004 TEL 801.590.6611 FAX
WWW.PERIGEECIVIL.COM

DATE:
TIME:
NETWORK:
PATH:
DWG NAME:
LAYOUT:
DESIGNER:
MGR:

SHEET NUMBER
01

JOB NUMBER
00909

XREFS:

2924

Riverdale, UT
New Cafe | OPS Review

TODAY'S DATE
10/24/2022

OPENING DATE
10/15/2023

ESTIMATED CONSTRUCTION START
06/01/2023

LOCATION TYPE
[Suburban]

CAFE FOOTPRINT
[3,800 SF]

PROPOSED SEAT COUNT
[Interior: 66 | Exterior: 14]

POS & KIOSK COUNTS
[Proposed POS: 2 | Proposed Kiosks: 3]

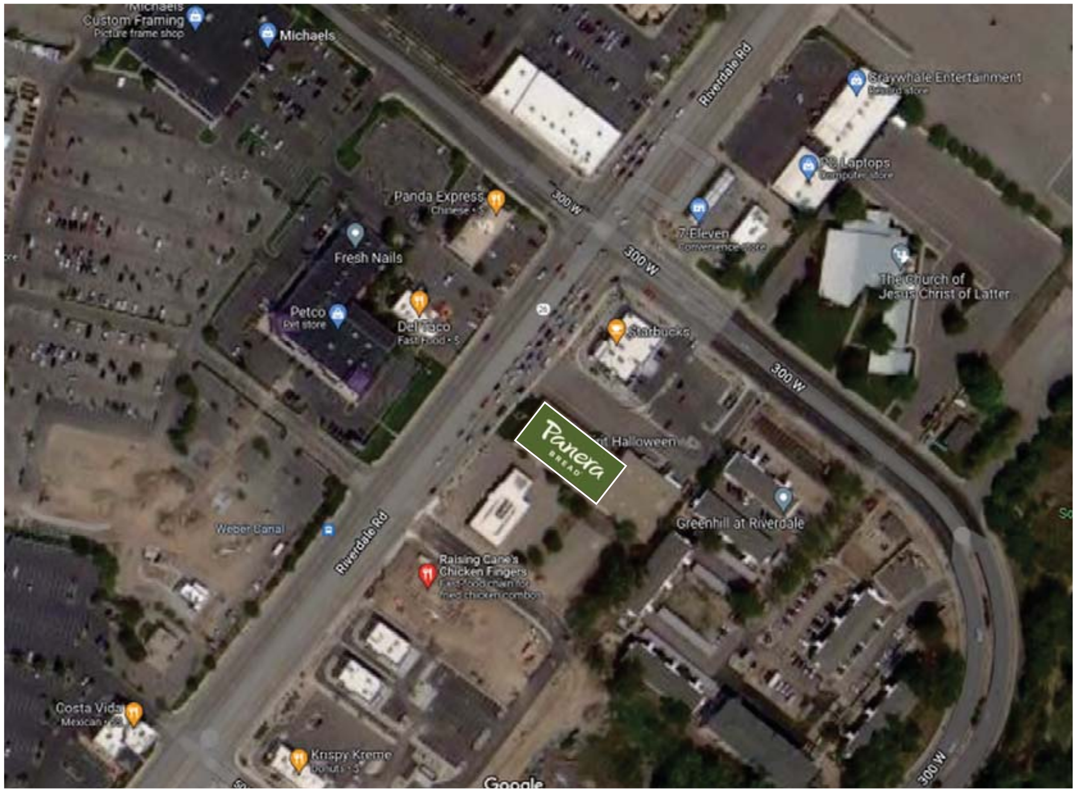
DELIVERY
[3rd Party]

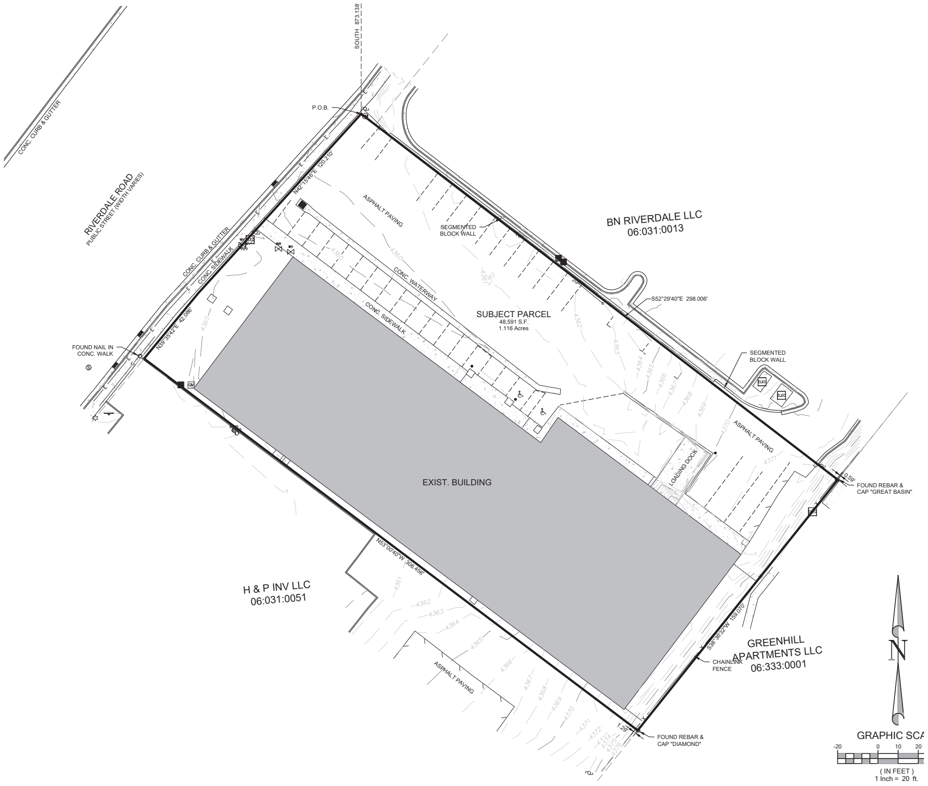
PRODUCTION & BAKING
[2x2 | T-line w/ DT, Remote Market bakery]

NOTES, NEARBY COMPETITORS, ETC.
[Cross-access w/ Starbucks, site grade +10' @ rear of site, Del Taco, Panda Express, Subway, Raising Canes, Cafe Rio, Chick Fil-A, Jimmy Johns]

☐ APPROVED ☐ APPROVED AS NOTED ☐ NOT APPROVED DATE: ____________________

EXISTING SITE

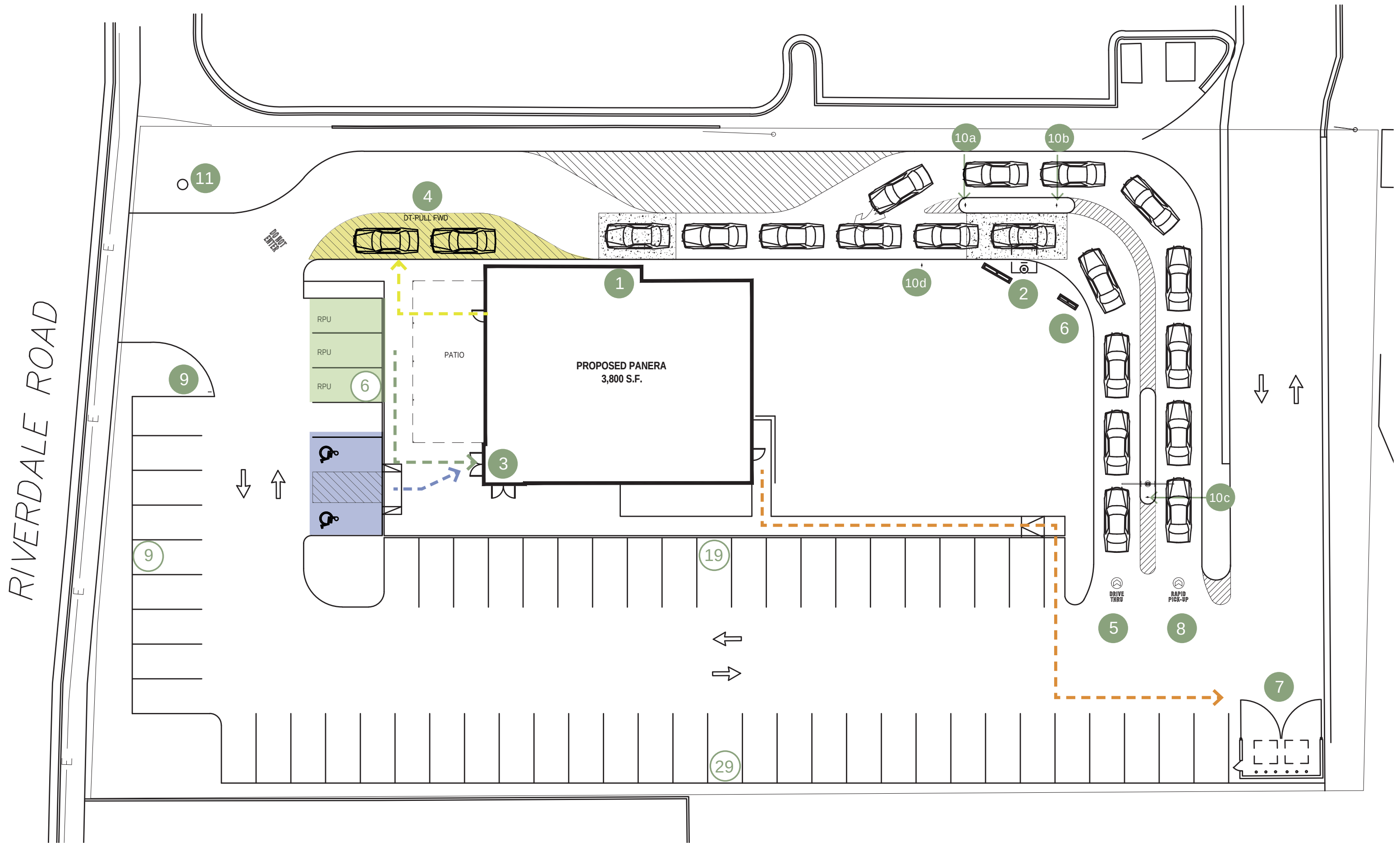




Aerial

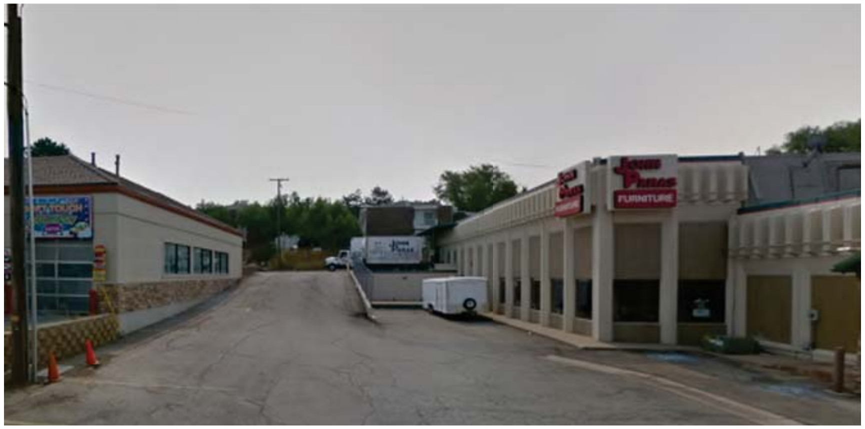
Development

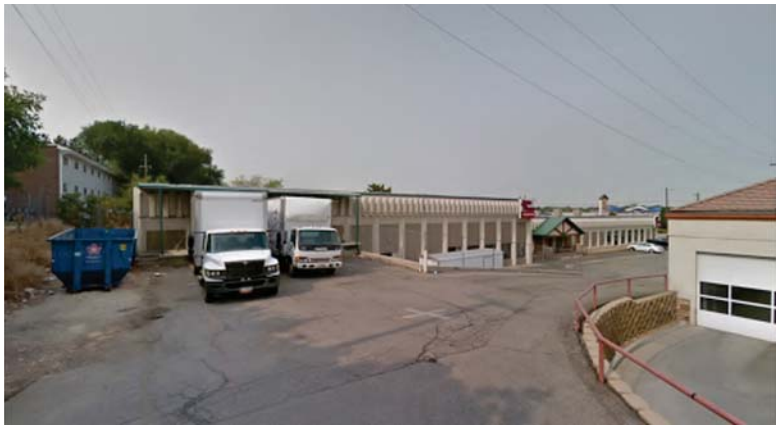
PROPOSED SITE

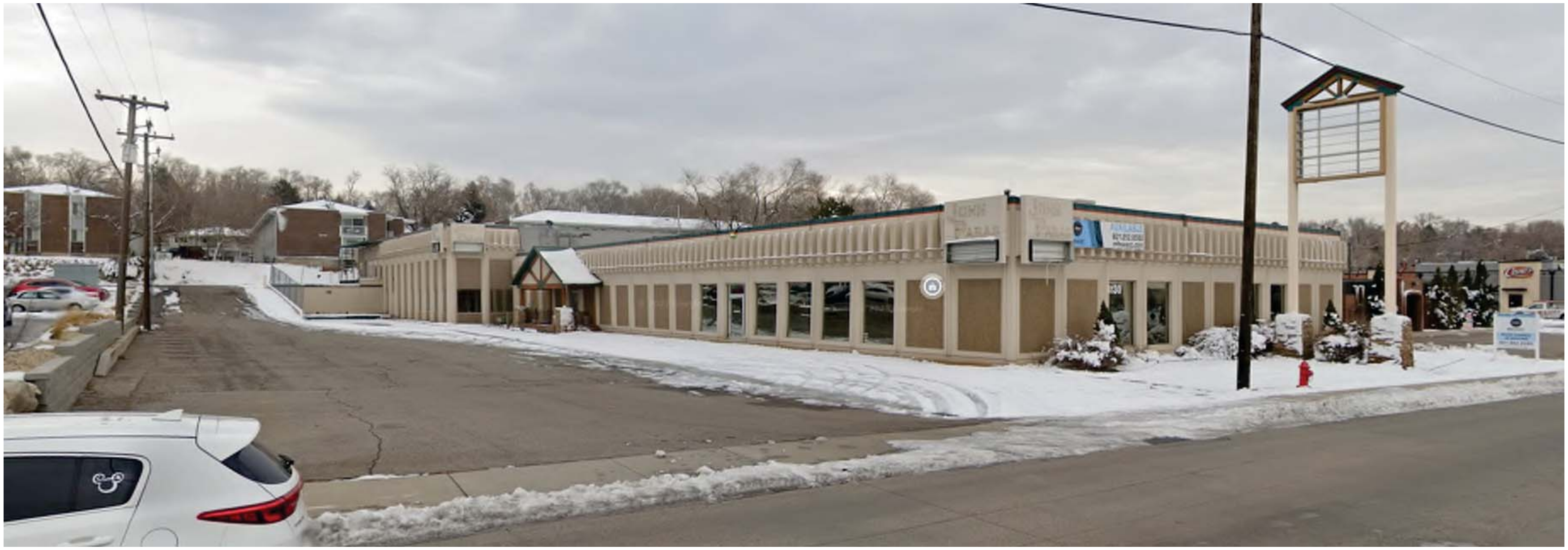


1	Drive Thru Window
2	Menu Board
3	Cafe Main Entry
4	Signed Pull Forward Spaces
5	Drive Thru Entry
6	Preview Sign
7	Trash Enclosure
8	Rapid Pick-Up Lane Entry
9	Drive Thru/RPU Directional
10	Drive Thru Messaging a | Merge b | Bread Ahead... c | DT/RPU Lane ID d | Kindly Merge....
11	(E) Pylon Sign
x	Parking Count (63 total)
- - -→	Rapid Pick-up Path of Travel
- - -→	ADA Path of Travel
- - -→	DT Associate Path of Travel
- - -→	Service Path of Travel
🟩	RPU Parking
🟦	ADA Parking
🟨	Drive Thru Pull Forward

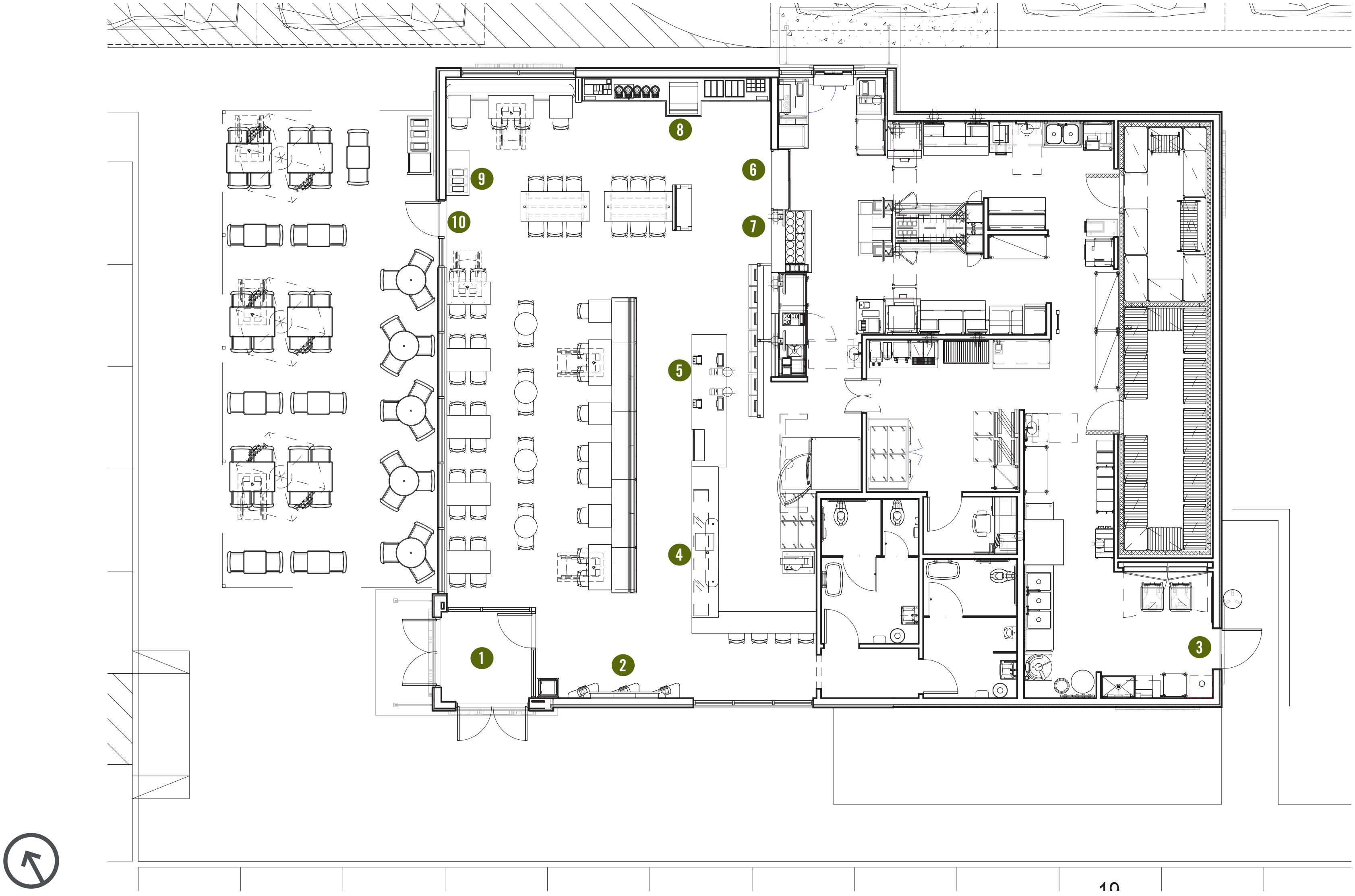
EXISTING EXTERIORS





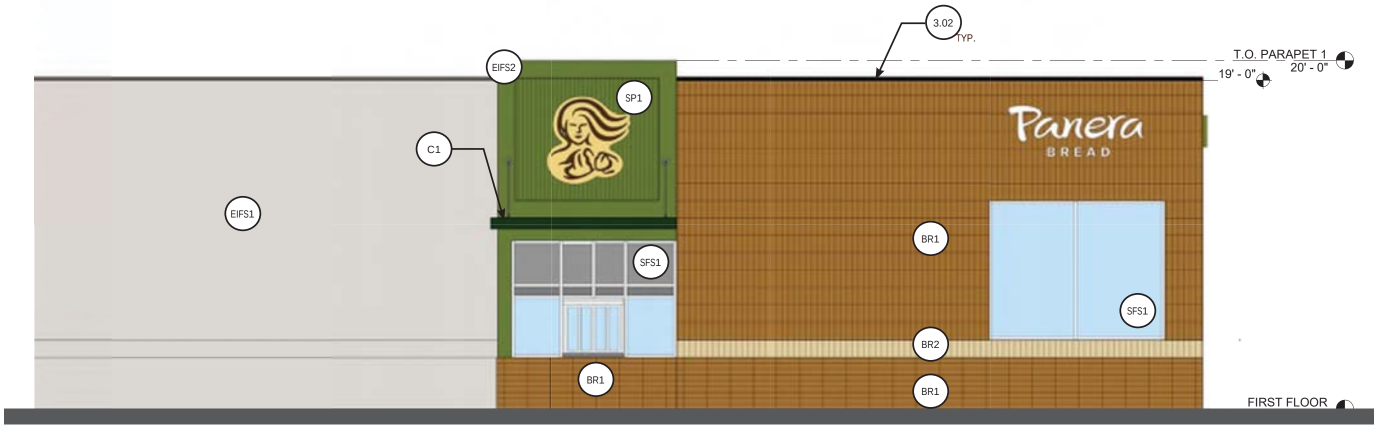


FLOOR PLAN

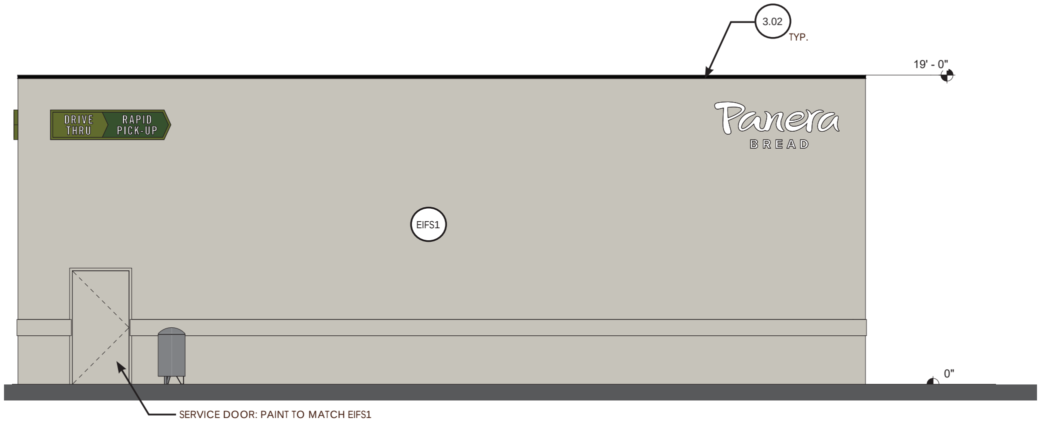


1. Primary Entrance
2. Kiosks
3. Service Entry
4. Bakery
5. POS
6. Pick-Up/Delivery
7. RPU Shelves
8. Beverages
9. Trash/Bus
10. Secondary Entry

ELEVATIONS



North Elevation



East Elevation

Exterior Materials

BR1 - Thin Brick, field
Mfg: Creative Materials
Size: Standard
Color: Santiago Blend

EIFS2 - Exterior Insulation Finish System
Mfg: Dryvit "Outsulation Plus MD" EIFS with moisture drainage,
Color: Match PMS 2307C
Texture: Dryvit "Lymestone" DPR textured finish

SFS1 - Storefront System
Mfg: Trifab Versaglaze 451
Framing System
Finish: Clear anodized aluminum

BR2 - Thin Brick, accent
Size: standard
Color: Goldenbluff

EIFS1 - Exterior Insulation Finish System
Mfg: Dryvit "Outsulation Plus MD" EIFS with moisture drainage
Color: #105 Suede
Texture: Dryvit "Lymestone" DPR textured finish

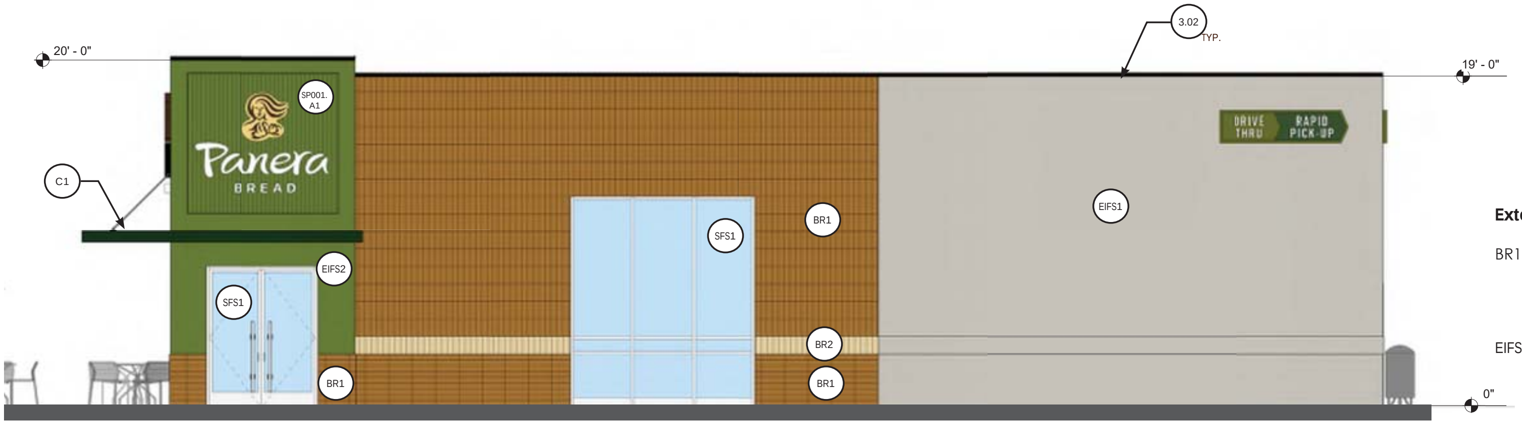
C1 - Pre-Manufactured aluminum canopy - color match PMS2411C

3.02 - Pre-finished metal coping, color to match RAL 7043

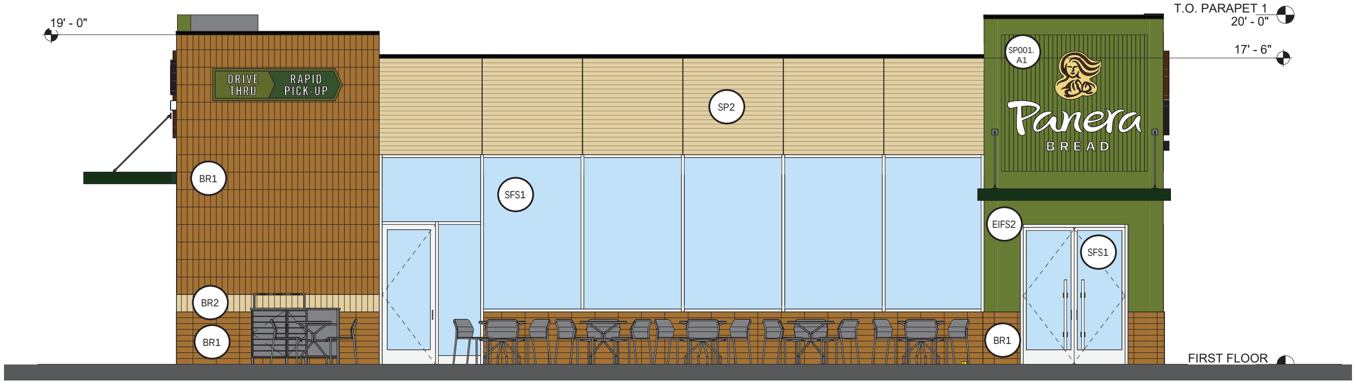
SP1 - Fiberglass Reinforced Panel
Mfg: Formglas FRP Custom Pattern
Surface: Handcrafted Flute
Paint Type: Gel, matte finish
Paint Color: Match PMS2307C

SP2 - Fiberglass Reinforced Panel
Mfg: Knotwood
Self-mating cladding system
Color: White Ash

ELEVATIONS



South Elevation



West Elevation

Exterior Materials

BR1 - Thin Brick, field
Mfg: Creative Materials
Size: Standard
Color: Santiago Blend

EIFS2 - Exterior Insulation Finish System
Mfg: Dryvit "Outsulation Plus MD" EIFS with moisture drainage,
Color: Match PMS 2307C
Texture: Dryvit "Lymestone" DPR textured finish

SFS1 - Storefront System
Mfg: Trifab Versaglaze 451
Framing System
Finish: Clear anodized aluminum

BR2 - Thin Brick, accent
Size: standard
Color: Goldenbluff

EIFS1 - Exterior Insulation Finish System
Mfg: Dryvit “Outsulation Plus MD” EIFS with moisture drainage
Color: #105 Suede
Texture: Dryvit “Lymestone” DPR textured finish

C1 - Pre-Manufactured aluminum canopy - color match PMS2411C

3.02 - Pre-finished metal coping, color to match RAL 7043

SP1 - Fiberglass Reinforced Panel
Mfg: Formglas FRP Custom Pattern
Surface: Handcrafted Flute
Paint Type: Gel, matte finish
Paint Color: Match PMS2307C

SP2 - Fiberglass Reinforced Panel
Mfg: Knotwood
Self-mating cladding system
Color: White Ash

2924

Riverdale, UT
New Cafe | DD Review

TODAY'S DATE
11/18/2022

OPENING DATE
10/15/2023

ESTIMATED CONSTRUCTION START
06/01/2023

LOCATION TYPE
[Suburban]

CAFE FOOTPRINT
[3,800 SF]

PROPOSED SEAT COUNT
[Interior: 64 | Exterior: 14]

POS & KIOSK COUNTS
[Proposed POS: 2 | Proposed Kiosks: 3]

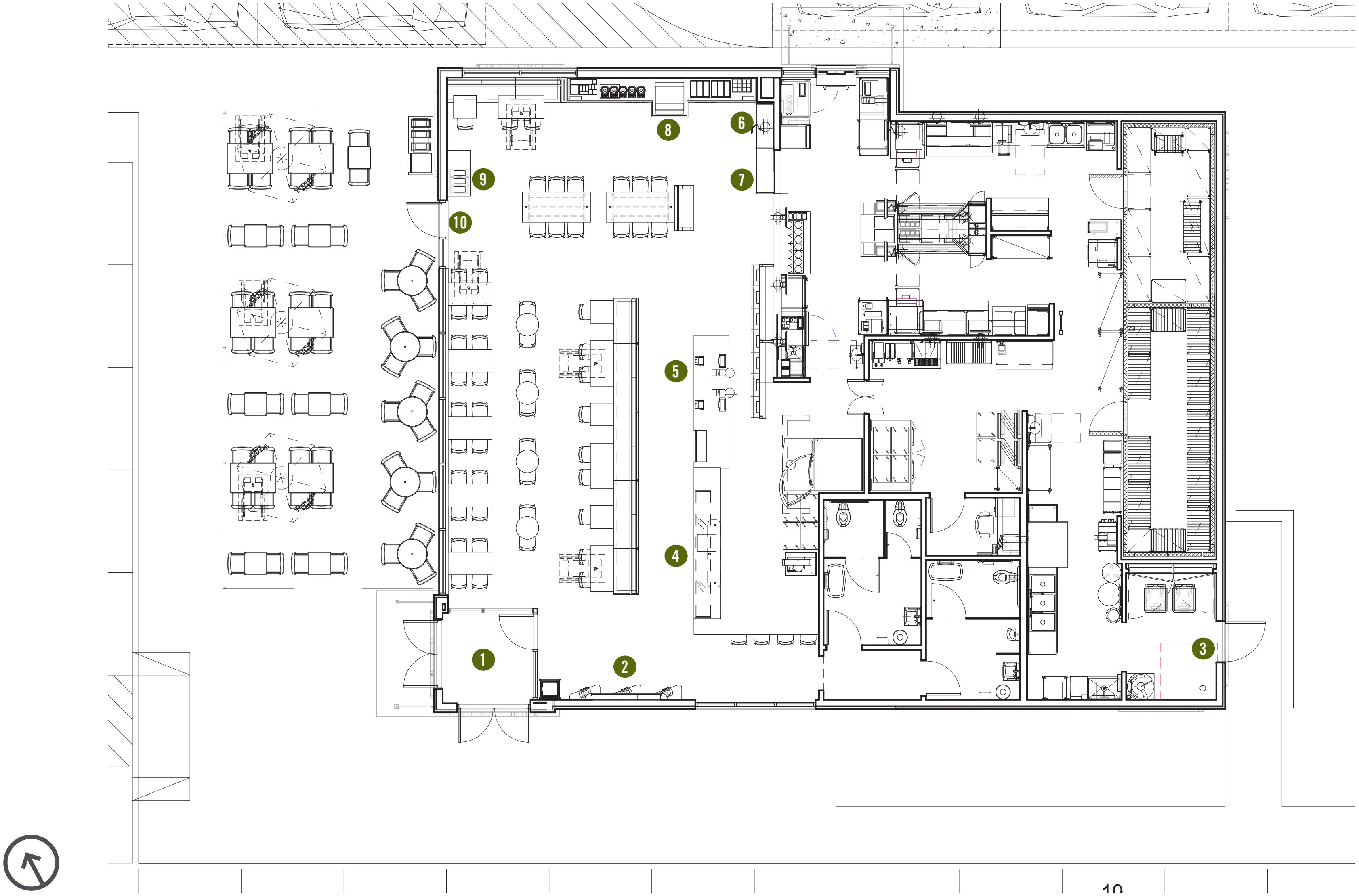
DELIVERY
[3rd Party]

PRODUCTION & BAKING
[2x2 | T-line w/ DT, Remote Market bakery]

NOTES, NEARBY COMPETITORS, ETC.
[Cross-access w/ Starbucks, site grade +10' @ rear of site, Del Taco, Panda Express, Subway, Raising Canes, Cafe Rio, Chick Fil-A, Jimmy Johns]

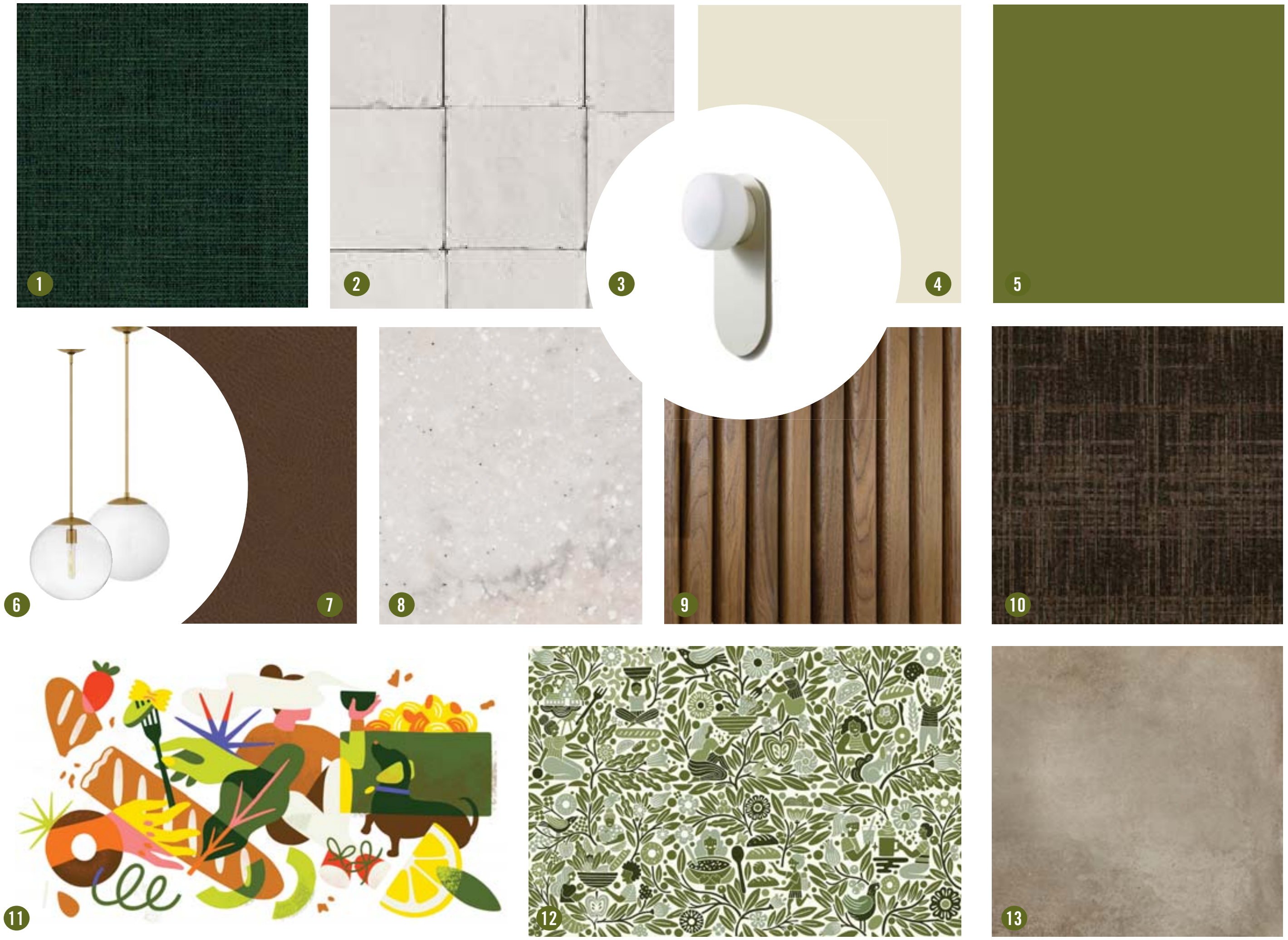
☐ APPROVED ☐ APPROVED AS NOTED ☐ NOT APPROVED DATE: ____________________

FLOOR PLAN



① Primary Entrance
② Kiosks
③ Service Entry
④ Bakery
⑤ POS
⑥ Pick-Up/Delivery
⑦ RPU Shelves
⑧ Beverages
⑨ Trash/Bus
⑩ Secondary Entry

INTERIOR FINISHES



NEXT GEN PALETTE

① F185 | Momentum Flock - Forrest

② T102 | Wow Tile - Zellige Porcelain Tile - Speckled Taupe

③ WS16A | Rich Brilliant Willing - Silk Sconce, oval backer - Gray

④ P291 | Bejnamin Moore - Collector's Item

⑤ P290 | Benjamin Moore - Avocado

⑥ LP021.M1/2 | Hinkly 14" Warby MD Pendant Frosted & Clear

⑦ S10 | Deisgntex Rein - Sable

⑧ SS23 | Dupont Corian - Rain Cloud

⑨ MW900.H1 + WD4 | Half Rounded Walnut

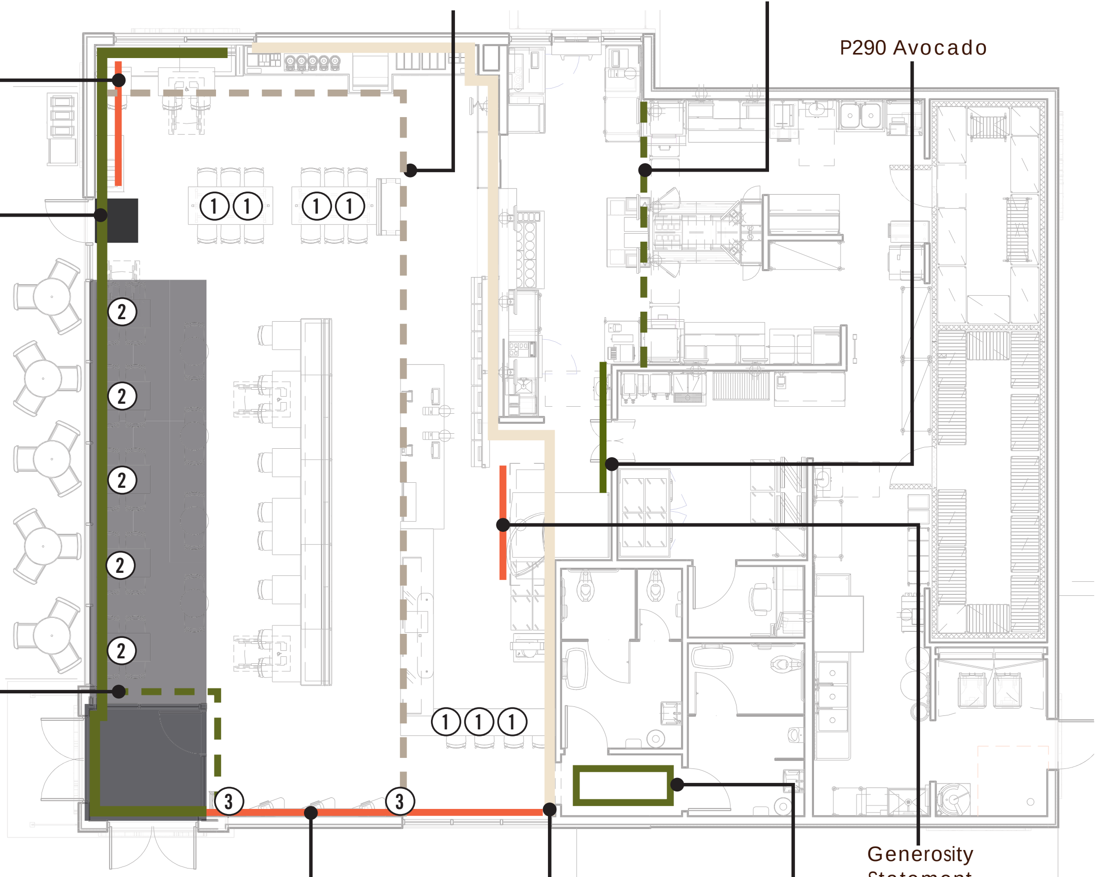
⑩ C6 | Shaw Contract | Matrix - Mesa

⑪ AP014.A1 - A6 | Monique Aimee - framed canvas, various sizes

⑫ AW013.A1 | Carmi Grau Monochrome/ Cream mural

⑬ T104 | Creative Materials - Oxidize, brown, 12"x24"

FINISH PLAN | FOR REFERENCE ONLY



P292 Collector's Item gyp. ceiling

P290 Avocado soffit & Food Beliefs Statement

P290 Avocado

Monique Aimee Gallery Wall Install

P290 Avocado & Chair Rail

P290 Avocado on soffit above

CARMI GRAU AW013.A1 Monochrome/Cream Mural Chair Rail & Wainscot below

T102 WOW tile & P292 Collector's Item above

P290 Avocado

Generosity Statement on hood

Decorative Lighting

① Hinkley Pendant - Clear

② Hinkley Pendant - Frosted

③ RBW Silk Sconce

Flooring

T104 - Oxidize tile (typ. dining)

▨ C6 - Matrix carpet

▨ C5 - Black Pearl carpet

Monique Aimee Gallery Wall

ⓐ AP014.A4 - 28"x40" print stretch canvas, white oak frame

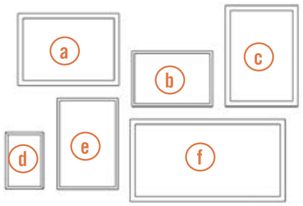
ⓑ AP014.A6 - 24"x30" print stretch canvas, white oak frame

ⓒ AP014.A2 - 40"x28" print stretch canvas, white oak frame

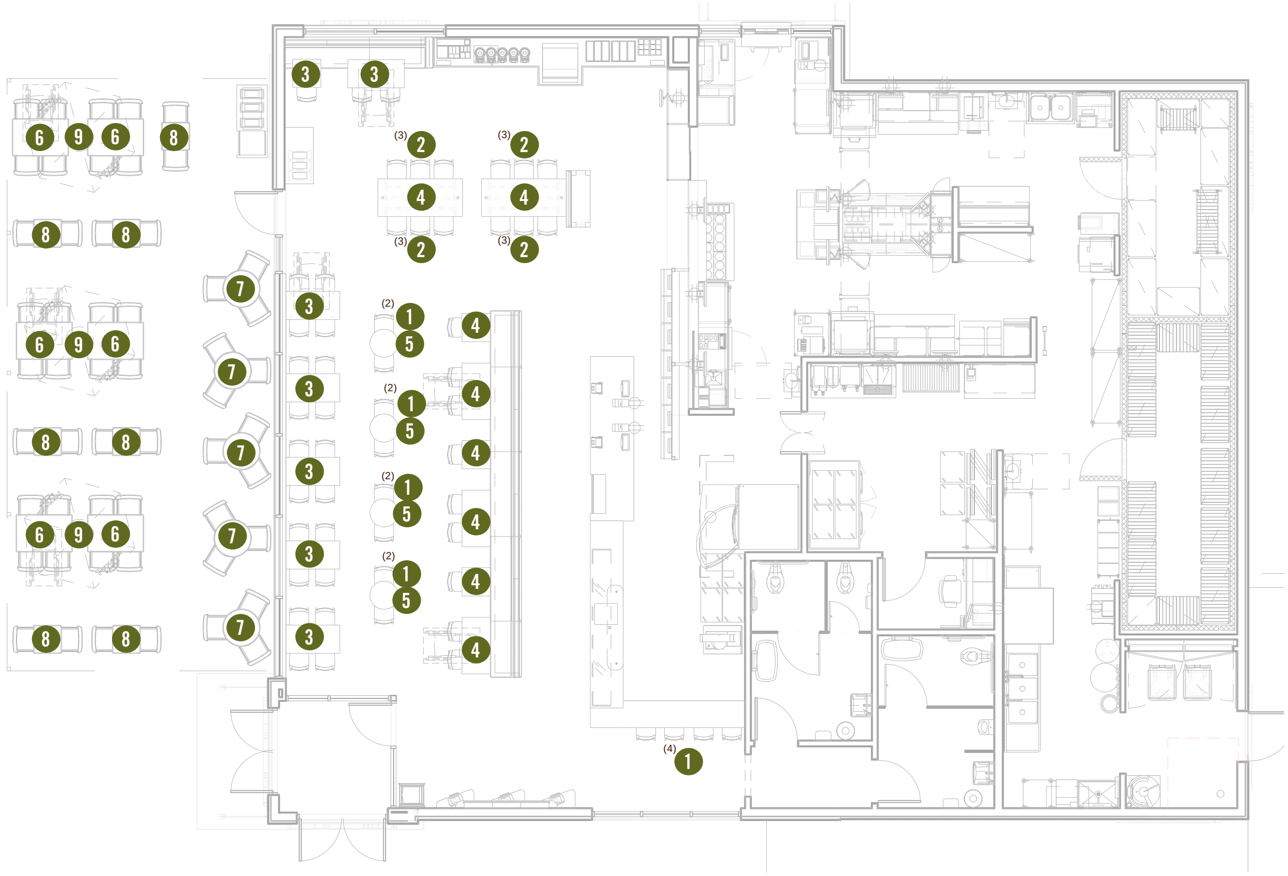
ⓓ AP014.A3 - 20"x18" print stretch canvas, white oak frame

ⓔ AP014.A5 - 30"x24" print stretch canvas, white oak frame

ⓕ AP014.A1 - 30"x60" print stretch canvas, white oak frame



FURNITURE PLAN | FOR REFERENCE ONLY



Indoor Furniture

FS001.D3 + FS006.D3 | Loft Chair - typ. u.o.n.

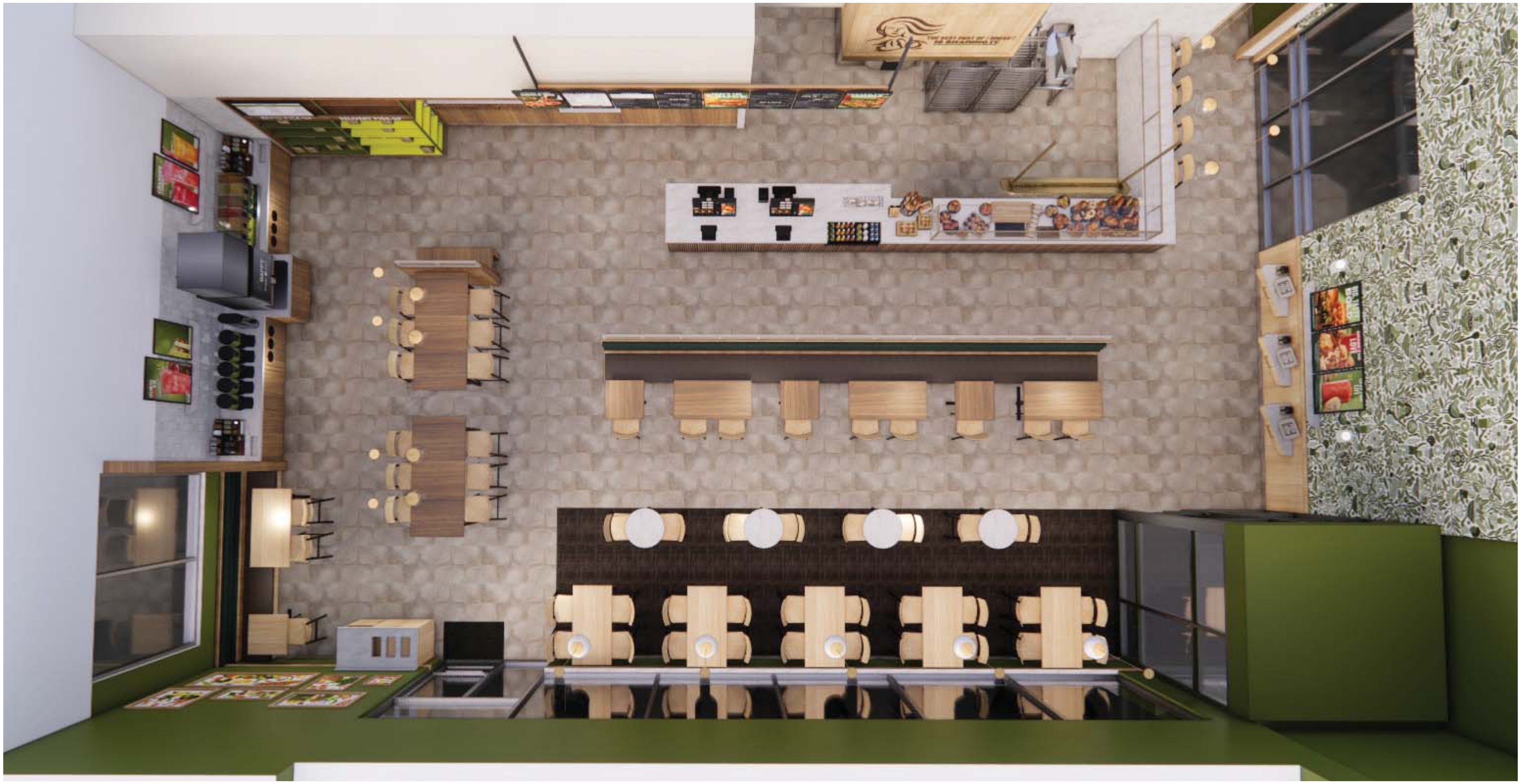
- ❶ FS001.C3 + FS006.D3 | Loft Counter stool
- ❷ FS001.B3 + FS006.D3 | Loft Bar stool
- ❸ FT001.x1 | Oak Light table top finish
- ❹ FT001.x2 | Oak Dark table top finish
- ❺ FT206.x3 | Corian Rain Cloud

Outdoor Furniture

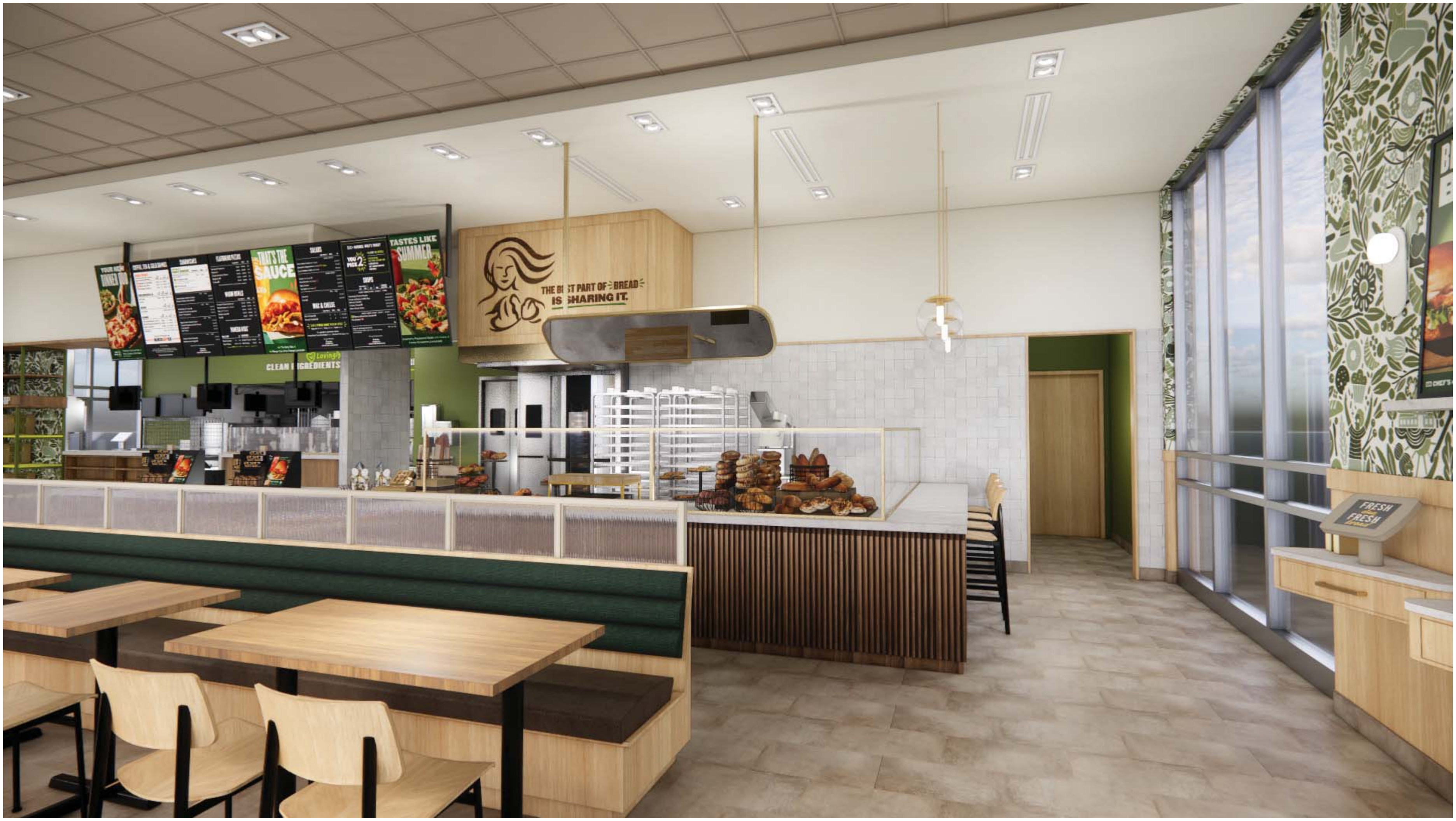
ODC2MAI | Darwin Chair, antique iron - typ. u.o.n.

- ❻ OT3248AI | Cambi ADA, antique iron
- ❼ OTR32AI | Cambi 32” dia., antique iron
- ❽ OT2424AI | Cambi 24”x24”, antique iron
- ❾ FU001.A1 | Umbrella, tresco grass

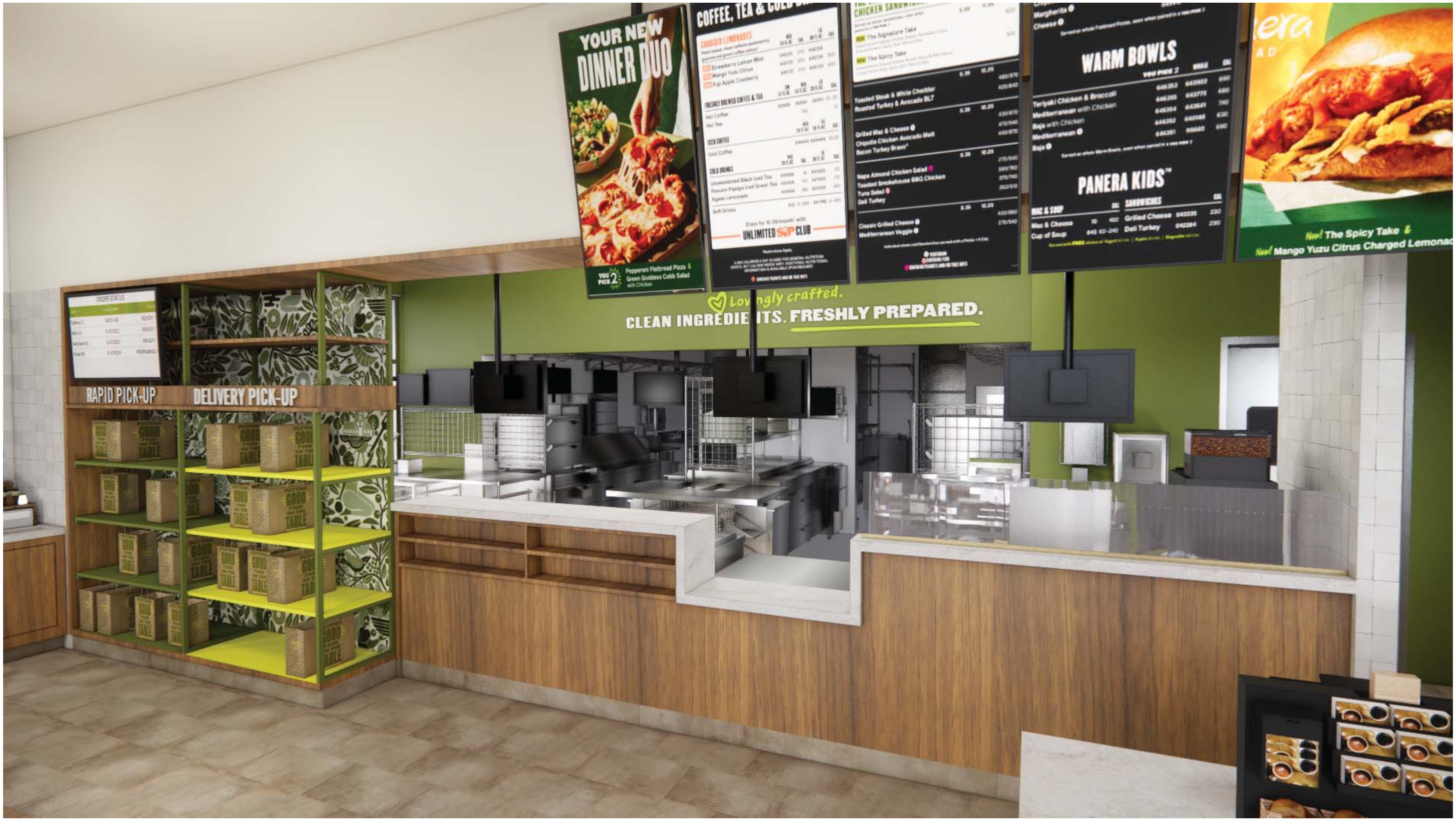
BIRD'S EYE VIEW



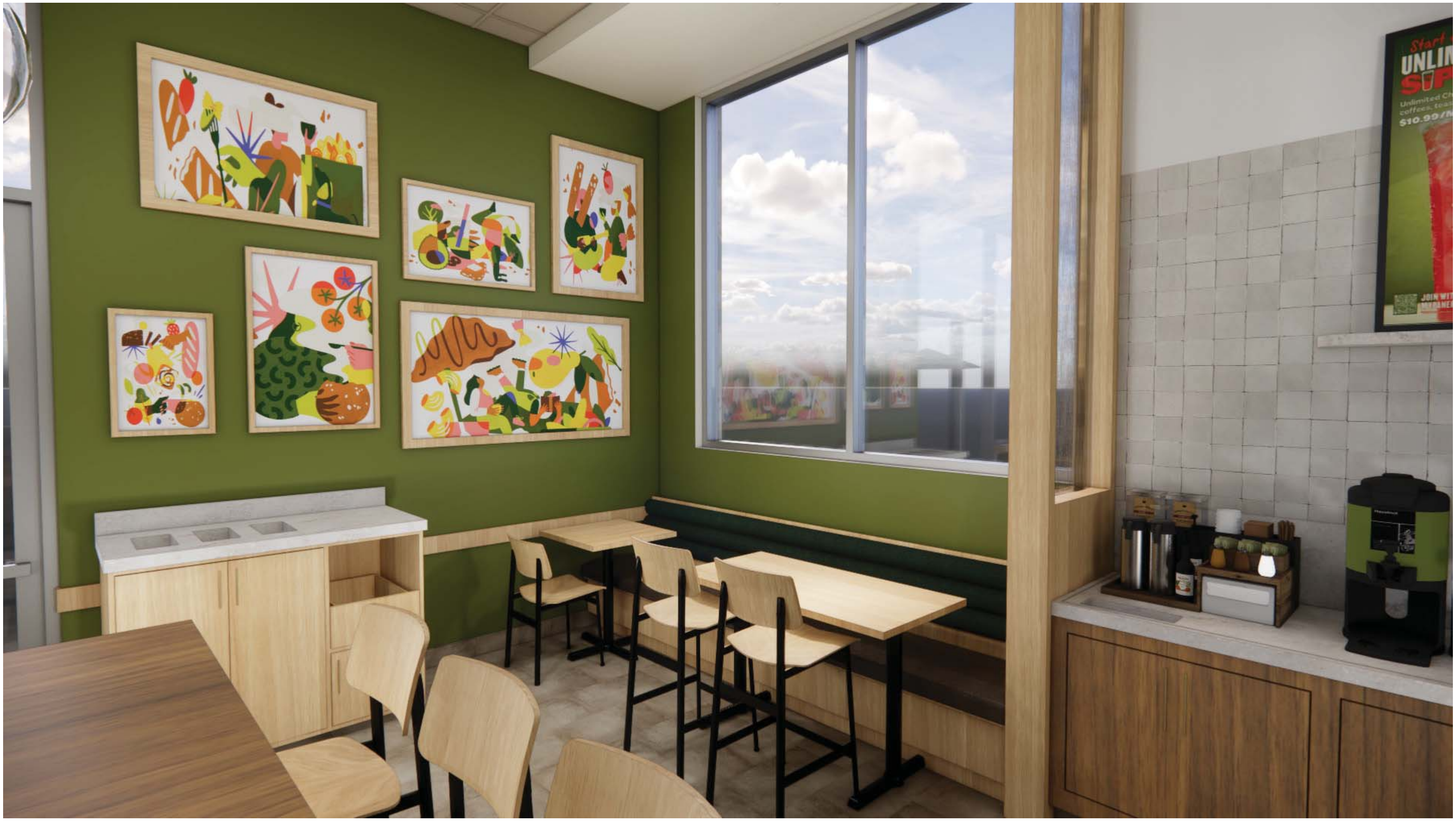
BAKERY


THAT'S THE SAUCE
TASTES LIKE SUMMER
CLEAN INGREDIENTS
THE BEST PART OF BREAD IS SHARING IT.
FRESH

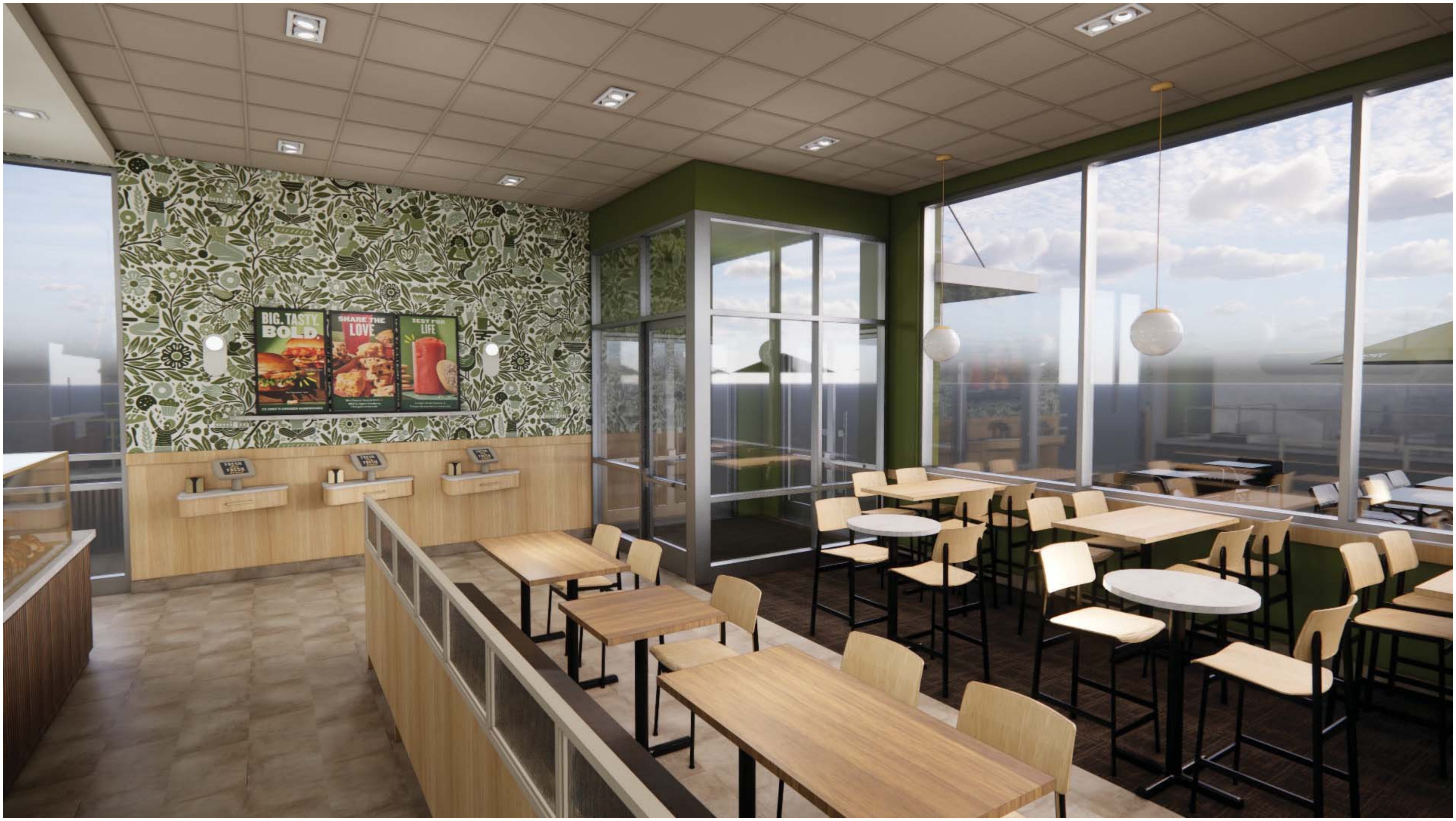
DELIVERY & RPU SHELVES

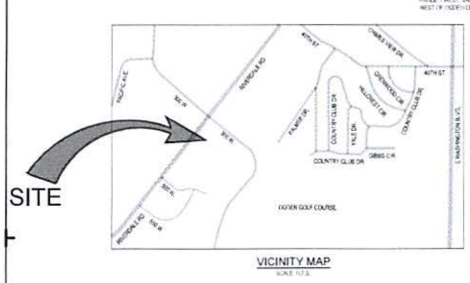


CORNER BANQUETTE



DINING ROOM





VICINITY MAP
SCALE: N.T.S.

LEGEND

──	RIGHT OF WAY / SUBDIVISION LINE	⊕	FIRE HYDRANT
─·─·─	SUBJECT PROPERTY LINE	⊗	WATER METER
─·─	CENTERLINE/CONTROL LINE	●	WATER VALVE
··─··─	SECTION LINE	⊙	ELECTRICAL METER
- - -	EASEMENT LINE	→	GUY WIRE
─x─	FENCE	✲	LIGHT POLE
─OP─	OVERHEAD POWER	⊖	UTILITY POLE
─UP─	UNDERGROUND POWER	•CO	CLEAN OUT
─C─	COMMUNICATION LINE	○	SANITARY SEWER MANHOLE
─W─	WATER LINE	⊙	NATURAL GAS METER
─S─	SANITARY SEWER LINE	■	STORM DRAIN CATCH BASIN
─SD─	STORM DRAIN LINE	○	STORM DRAIN MANHOLE
─G─	NATURAL GAS LINE	■ COMM	COMMUNICATIONS BOX
～	MAJOR CONTOUR	•	BOLLARD
- ～ -	MINOR CONTOUR	○	PROPERTY CORNER
▨	BUILDING	☮	DECIDUOUS TREE
☼	CONIFEROUS TREE		

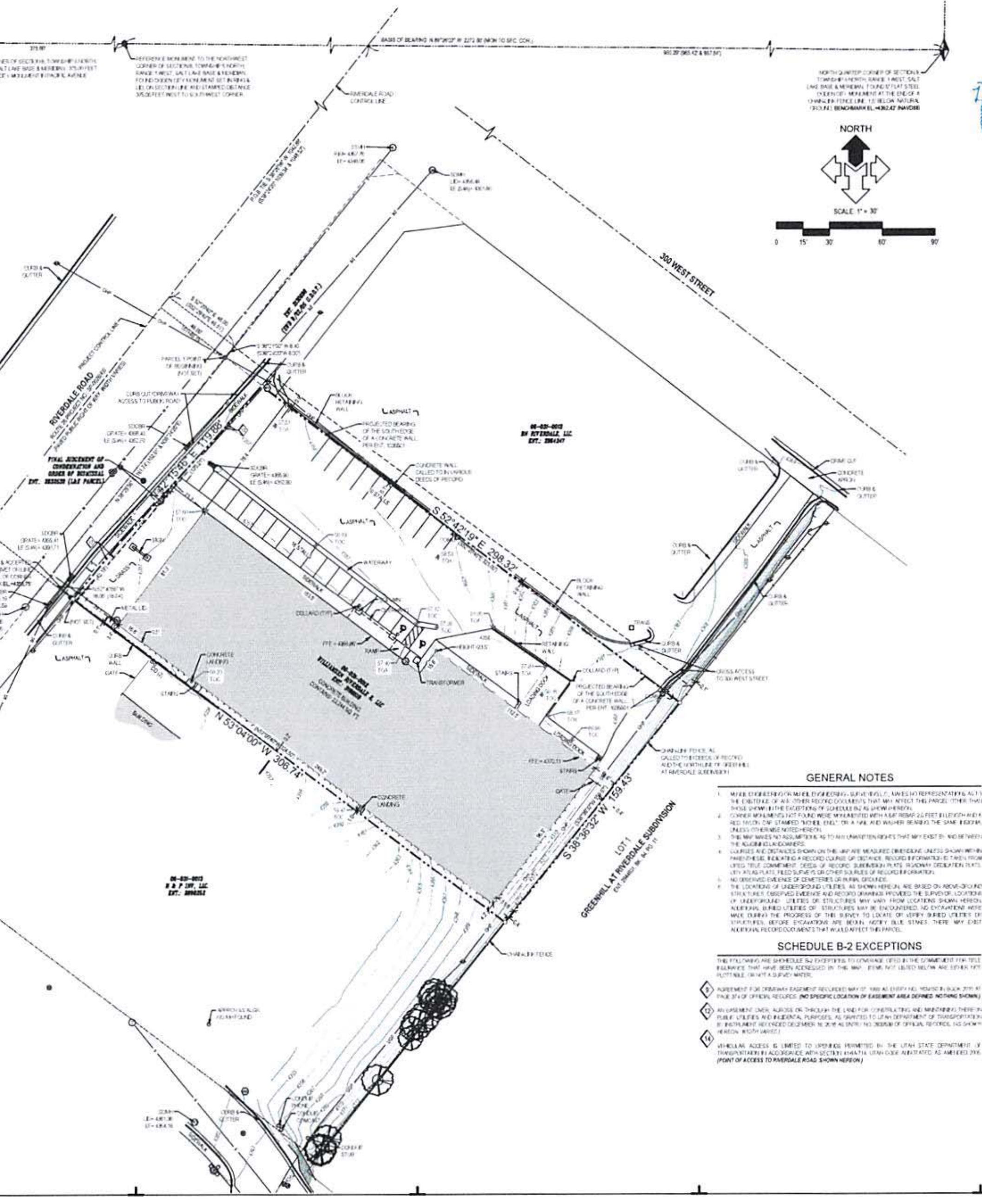

BASIS OF BEARING N 89°20'12" W 2272.98' (MEAS TO SEC. COR.)
NORTHWEST CORNER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN
REFERENCE MONUMENT TO THE NORTHWEST CORNER OF SECTION 8
NORTH QUARTER CORNER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN
BENCHMARK EL.=4362.42 (NAVD88)
RIVERDALE ROAD CONTROL LINE
NORTH
SCALE: 1" = 30'
0
15'
30'
60'
90'
300 WEST STREET
RIVERDALE ROAD
FINAL JUDGEMENT OF CONDEMNATION AND ORDER OF DISMISSAL ENT. 2835826 (LAS PARCEL)
PARCEL 1 POINT OF BEGINNING
S 52°42'19" E 298.32'
N 53°04'00" W 306.74'
S 38°36'32" W 159.43'
06-031-0012 BY RIVERDALE, LLC ENT. 2864347
06-031-0013 R & P 197, LLC ENT. 2850352
WILLIAMSEN RIVERDALE 2, LLC
CONCRETE BUILDING
LOCAL BENCHMARK EL.=4362.79
ASPHALT
CURB & GUTTER
CONCRETE WALL
BLOCK RETAINING WALL
TRANSFORMER
CONCRETE LANDING
STAIRS
GREENHILL AT RIVERDALE SUBDIVISION
LOT 1
CHAINLINK FENCE
CROSS ACCESS TO 300 WEST STREET

TABLE "A" ITEMS

THE FOLLOWING NOTES PERTAIN TO OPTIONAL TABLE A ITEMS CITED IN THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS.

1. MONUMENT WERE FOUND OR SET, PER GENERAL NOTE 2.
2. THE ADDRESS OF THE SUBJECT PARCEL IS: 4132 SOUTH RIVERDALE ROAD, RIVERDALE, UTAH, AS DISCLOSED BY COUNTY RECORDS.
3. THE SUBJECT PARCEL IS SITUATE WITHIN ZONE "X" AREAS OF MINIMAL FLOOD HAZARD AND IS NOT WITHIN A SPECIAL FLOOD HAZARD AREA, PER FEMA MAP NO. 49057C0428E, WITH AN EFFECTIVE DATE OF 12/16/2005.
4. THE GROSS LAND AREA IS: 48,620 SQ. FT. OR 1.116 ACRES.
5. CONTOURS ARE REPRESENTED AT 1 FOOT INTERVALS AND ARE BASED UPON NAVD88 DATUM. SEE BENCHMARK INFORMATION IN SURVEY NARRATIVE.

7(a). EXTERIOR DIMENSIONS OF ALL BUILDING SHOWN HEREON AND BASED AT GROUND LEVEL.
7(b). BUILDING SQUARE FOOTAGE SHOWN HEREON, PER ABOVE REFERENCED MEASUREMENTS.
7(c). BUILDING HEIGHT SHOWN HEREON AND MEASURED AT THE LOCATION INDICATED.
8. SUBSTANTIAL IMPROVEMENTS OBSERVED, SHOWN HEREON.
9. THERE ARE 26 REGULAR PARKING STALLS AND 2 HANDICAP STALLS, TOTALING 28 STALLS IN ALL.
11. UNDERGROUND UTILITIES, SHOWN HEREON, PER GENERAL NOTE 6.
13. NAMES OF ADJOINING OWNERS, SHOWN HEREON.
16. AT THE TIME OF THIS SURVEY THERE IS NO OBSERVED EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS IN RECENT MONTHS.

GENERAL NOTES

1. MCNEIL ENGINEERING OR MCNEIL ENGINEERING - SURVEYING L.C., MAKES NO REPRESENTATIONS AS TO THE EXISTENCE OF ANY OTHER RECORD DOCUMENTS THAT MAY AFFECT THIS PARCEL OTHER THAN THOSE SHOWN IN THE EXCEPTIONS OF SCHEDULE B2 AS SHOWN HEREON.
2. CORNER MONUMENTS NOT FOUND WERE MONUMENTED WITH A 5/8" REBAR 2.0 FEET IN LENGTH AND A RED NYLON CAP STAMPED "MCNEIL ENG." OR A NAIL AND WASHER BEARING THE SAME INSIGNIA, UNLESS OTHERWISE NOTED HEREON.
3. THIS MAP MAKES NO ASSUMPTIONS AS TO ANY UNWRITTEN RIGHTS THAT MAY EXIST BY AND BETWEEN THE ADJOINING LANDOWNERS.
4. COURSES AND DISTANCES SHOWN ON THIS MAP ARE MEASURED DIMENSIONS UNLESS SHOWN WITHIN PARENTHESIS, INDICATING A RECORD COURSE OR DISTANCE. RECORD INFORMATION IS TAKEN FROM CITED TITLE COMMITMENT, DEEDS OF RECORD, SUBDIVISION PLATS, ROADWAY DEDICATION PLATS, CITY ATLAS PLATS, FILED SURVEYS OR OTHER SOURCES OF RECORD INFORMATION.
5. NO OBSERVED EVIDENCE OF CEMETERIES OR BURIAL GROUNDS.
6. THE LOCATIONS OF UNDERGROUND UTILITIES, AS SHOWN HEREON, ARE BASED ON ABOVE-GROUND STRUCTURES, OBSERVED EVIDENCE AND RECORD DRAWINGS PROVIDED THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES OR STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES OR STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE OR VERIFY BURIED UTILITIES OR STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, NOTIFY BLUE STAKES. THERE MAY EXIST ADDITIONAL RECORD DOCUMENTS THAT WOULD AFFECT THIS PARCEL.

SCHEDULE B-2 EXCEPTIONS

THE FOLLOWING ARE SCHEDULE B-2 EXCEPTIONS TO COVERAGE CITED IN THE COMMITMENT FOR TITLE INSURANCE THAT HAVE BEEN ADDRESSED BY THIS MAP. ITEMS NOT LISTED BELOW ARE EITHER NOT PLOTTABLE, OR NOT A SURVEY MATTER.

◇9 AGREEMENT FOR DRIVEWAY EASEMENT RECORDED MAY 27, 1988 AS ENTRY NO. [illegible] IN BOOK 2115 AT PAGE 374 OF OFFICIAL RECORDS. ***(NO SPECIFIC LOCATION OF EASEMENT AREA DEFINED. NOTHING SHOWN.)***

◇12 AN EASEMENT OVER, ACROSS OR THROUGH THE LAND FOR CONSTRUCTING AND MAINTAINING THEREIN PUBLIC UTILITIES AND INCIDENTAL PURPOSES, AS GRANTED TO UTAH DEPARTMENT OF TRANSPORTATION BY INSTRUMENT RECORDED DECEMBER 16, 2019 AS ENTRY NO. 2835826 OF OFFICIAL RECORDS. (AS SHOWN HEREON. WIDTH VARIES.)

◇14 VEHICULAR ACCESS IS LIMITED TO OPENINGS PERMITTED BY THE UTAH STATE DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH SECTION 41-6A-714, UTAH CODE ANNOTATED, AS AMENDED 2016. ***(POINT OF ACCESS TO RIVERDALE ROAD SHOWN HEREON.)***

SURVEYOR'S CERTIFICATE

TO: WILLIAMSEN RIVERDALE 2 LLC, FIRST AMERICAN TITLE INSURANCE COMPANY, AMERICAN BREAD COMPANY, LLC

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 7(a), 7(b), 7(c), 8, 9, 11, 13 & 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 30, 2021.

SEP 15, 2022

Dennis K. Withers

DENNIS K. WITHERS
No. 6135190
11/10/22

DENNIS K. WITHERS
LICENSE NO. 6135190

DESCRIPTION PER ENT.: 3188519

A PART OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY.

BEGINNING 965.42 FEET (967.34 ORIGINAL DEED) NORTH 89°20'12" WEST (STATE PLANE) ALONG THE SECTION LINE, 1030.34 FEET (1048.52 ORIGINAL DEED) SOUTH 38°24'27" WEST ALONG THE CENTERLINE OF RIVERDALE ROAD, 46.51 FEET (46.52 ORIGINAL DEED) SOUTH 52°29'47" EAST AND 8.00 FEET SOUTH 38°24'27" WEST FROM THE NORTHEAST CORNER OF SAID QUARTER SECTION, AND RUNNING THENCE SOUTH 52°29'47" EAST 305.00 FEET TO A FENCE; THENCE SOUTH 38°36'32" WEST 160.27 FEET ALONG SAID FENCE TO THE LOCATION OF A FENCE IN 1977; THENCE NORTH 52°00'47" WEST 304.50 FEET ALONG SAID FENCE AS LOCATED IN 1977 TO THE EASTERLY LINE OF RIVERDALE ROAD; THENCE NORTH 38°24'27" EAST 162.00 FEET ALONG SAID EASTERLY LINE TO THE POINT OF BEGINNING.

LESS AND EXCEPTING THAT PORTION OF LAND AS SET FORTH IN FINAL ORDER OF CONDEMNATION RECORDED DECEMBER 16, 2019 AS ENTRY NO. 2835826 OF OFFICIAL RECORDS.

A PARCEL OF LAND IN FEE, BEING A PART OF AN ENTIRE TRACT OF PROPERTY, SITUATE IN THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN. THE BOUNDARIES OF SAID PARCEL OF LAND ARE DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY BOUNDARY LINE OF SAID ENTIRE TRACT AND THE SOUTHEASTERLY RIGHT OF WAY LINE OF THE EXISTING HIGHWAY STATE ROUTE 26. SAID INTERSECTION IS 964.46 FEET (965.42 FEET BY RECORD) NORTH 89°20'07" WEST ALONG THE SECTION LINE AND 1042.88 FEET SOUTH 38°29'58" WEST (1030.34 FEET SOUTH 38°24'27" WEST BY RECORD) AND 49.51 FEET SOUTH 52°29'47" EAST AND 8.00 FEET SOUTH 38°29'58" WEST (SOUTH 38°24'27" WEST BY RECORD) FROM THE NORTHEAST CORNER OF SAID QUARTER SECTION. SAID INTERSECTION IS ALSO 45.00 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM THE CONTROL LINE OF SAID PROJECT SP-0026(40) OPPOSITE APPROXIMATE ENGINEERS STATION 151+46.15; AND RUNNING THENCE SOUTH 52°30'08" EAST (SOUTH 52°29'47" EAST BY RECORD) 26.88 FEET ALONG SAID NORTHERLY BOUNDARY LINE TO A POINT 72.87 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE; THENCE SOUTH 42°16'40" WEST 130.21 FEET TO A POINT 64.88 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE OPPOSITE ENGINEERS STATION 150+28.72; THENCE SOUTH 38°36'42" WEST 42.19 FEET TO THE SOUTHERLY BOUNDARY LINE OF SAID ENTIRE TRACT AT A POINT 64.03 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE; THENCE NORTH 52°10'58" WEST (NORTH 52°00'47" WEST BY RECORD) 19.24 FEET ALONG SAID SOUTHERLY BOUNDARY LINE TO SAID SOUTHEASTERLY RIGHT OF WAY LINE; THENCE NORTH 38°29'58" EAST (NORTH 38°24'27" EAST BY RECORD) 162.11 FEET ALONG SAID RIGHT OF WAY LINE TO THE POINT OF BEGINNING. (NOTE: ROTATE ALL BEARINGS IN THE ABOVE DESCRIPTION 0°05'34" COUNTERCLOCKWISE TO OBTAIN HIGHWAY BEARINGS.)

A PERPETUAL NON-EXCLUSIVE EASEMENT FOR VEHICULAR INGRESS, EGRESS OVER AND ACROSS AS DISCLOSED IN AGREEMENT FOR DRIVEWAY EASEMENT RECORDED MAY 27, 1988 AS ENTRY NO. [illegible] IN BOOK 2115 AT PAGE 374 OF OFFICIAL RECORDS IN THE OFFICE OF THE WEBER COUNTY RECORDER, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY LINE OF A 66 FOOT ROAD (RIVERDALE ROAD), SAID POINT BEING ALSO SOUTH 728.42 FEET AND WEST 1475.72 FEET AND SOUTH 38°21' WEST 36.83 FEET FROM THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY; RUNNING THENCE SOUTH 38°21' WEST 121.36 FEET ALONG THE SOUTHEASTERLY LINE OF SAID 66 FEET ROAD; THENCE SOUTH 53°04' EAST 205.30 FEET ALONG AN EXISTING FENCE LINE; THENCE NORTH 38°21' EAST 130.1 FEET ALONG AN EXISTING FENCE LINE TO THE SOUTHWESTERLY LINE OF SAID 300 FOOT ROAD; THENCE SOUTH 89°02' WEST 16.06 FEET TO THE POINT OF BEGINNING.

ALSO: PART OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY.

BEGINNING AT A POINT ON THE EASTERLY LINE OF RIVERDALE ROAD, SAID POINT BEING 967.34 FEET NORTH 89°54' WEST ALONG THE SECTION LINE, 1048.52 FEET SOUTH 38°21' WEST ALONG THE CENTERLINE OF RIVERDALE ROAD AND 46.52 FEET SOUTH 52°14' EAST FROM THE NORTHEAST CORNER OF SAID NORTHWEST QUARTER; RUNNING THENCE SOUTH 52°14' EAST 305.30 FEET TO AN EXISTING 6 FOOT CHAIN LINK FENCE; THENCE SOUTH 38°21' WEST 10.50 FEET ALONG SAID FENCE TO A POINT IN LINE WITH THE SOUTH EDGE OF AN EXISTING CONCRETE WALL; THENCE NORTH 52°32' WEST 305.24 FEET ALONG THE SOUTHERLY EDGE OF SAID WALL AND WALL EXTENDED TO THE EASTERLY LINE OF RIVERDALE ROAD; THENCE NORTH 38°21' EAST 8.0 FEET ALONG SAID EASTERLY LINE TO THE POINT OF BEGINNING.

SURVEY NARRATIVE

THIS ALTA/NSPS LAND TITLE SURVEY WAS PREPARED AT THE REQUEST OF THE CHASEBROOK COMPANY FOR THE PURPOSES OF RETRACING THE HEREON DESCRIBED PARCEL OF LAND AND EVALUATING SCHEDULE B-2 EXCEPTIONS TO COVERAGE CITED IN THE COMMITMENT FOR TITLE INSURANCE.

THE BASIS OF BEARING FOR THIS SURVEY IS NORTH 89°20'12" WEST ALONG THE NORTH LINE OF OF THE NORTHWEST QUARTER OF SECTION 8, BETWEEN WEBER COUNTY MONUMENTS FOUND MARKING THE NORTH QUARTER CORNER AND THE WITNESS CORNER TO THE NORTHWEST CORNER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, AS SHOWN HEREON.

DEEDS OF RECORD CONTAIN MANY AMBIGUOUS TIES FROM THE NORTH QUARTER CORNER. HOWEVER, THE INTENT SEEMS TO BE ALONG THE SECTION LINE, TO A POINT OF INTERSECTION WITH THE CENTER OF RIVERDALE ROAD. THIS SURVEY USES THE RIVERDALE ROAD CONTROL LINE DEPICTED IN UDOT RIGHT OF WAY PLANS UNDER PROJECT NO. SP-0026(40). MEASURED TIES TO THE POINT OF BEGINNING ARE SHOWN HEREON.

THE NORTHERLY LINE WAS ESTABLISHED ALONG THE MEASURED BEARING OF THE SOUTH EDGE OF A CONCRETE WALL, PER OPERATIVE LANGUAGE WITHIN DEEDS OF RECORD, WHICH LANGUAGE WAS OMITTED FROM MORE RECENT VESTING DEEDS OF THE NORTHERLY ADJOINING PARCEL. SEE QUIT-CLAIM DEED RECORDED JANUARY 11, 1988, BETWEEN EARL F. HILL (PREDECESSOR IN TITLE TO THE SUBJECT PARCEL) AND KAR KMR, INC., RECORDED AS ENTRY NO. [illegible]. THE SUBJECT PARCEL IS JUNIOR TO THE PARCEL ADJOINING TO THE NORTHEAST, WITH THE CONCRETE WALL AND PROJECTED BEARING BEING THE LINE OF ORIGINAL CONVEYANCE.

THE EASTERLY LINE OF THE SUBJECT PARCEL WAS HELD ALONG THE WESTERLY LINE OF THE GREENHILL AT RIVERDALE SUBDIVISION, RECORDED AS ENTRY NO. [illegible] IN BOOK 84 AT PAGE 11, WHICH RECORD LINE MATCHES AN EXISTING CHAINLINK FENCE LINE, AS REFERENCED VARIOUS DEEDS OF RECORD IN THE AREA.

A COPPER RIVET SET IN THE CONCRETE SIDEWALK WAS FOUND AND ACCEPTED AS MARKING THE SOUTHERLY LINE OF THE SUBJECT PARCEL. FROM THIS POINT A RECORD BEARING OF SOUTH 52°04'00" EAST, WAS PROJECTED TO THE NORTHWESTERLY LINE OF THE GREENHILL AT RIVERDALE SUBDIVISION AND SHORTENED TO MATCH THE SOUTHEASTERLY LINE AS DESCRIBED IN THAT CERTAIN FINAL JUDGEMENT OF CONDEMNATION AND ORDER OF DISMISSAL, RECORD AS ENTRY NO. 2835826.

THE WESTERLY LINE OF THE SUBJECT PARCEL WAS HELD COINCIDENT WITH THE EASTERLY LINE OF RIVERDALE ROAD, PER UDOT RIGHT-OF-WAY PLAN AND THE ABOVE REFERENCED JUDGEMENT OF CONDEMNATION AND ORDER OF DISMISSAL, RECORD AS ENTRY NO. 2835826.

TITLE INFORMATION

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE SURVEYOR. ALL INFORMATION REGARDING RECORD EASEMENTS, ADJOINERS AND OTHER DOCUMENTS THAT MIGHT AFFECT THE QUALITY OF TITLE TO TRACT SHOWN HEREON WAS GAINED FROM TITLE COMMITMENT NO. [illegible] PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, EFFECTIVE DATE: OCTOBER 5TH 2021, AT 2:50 PM.

SIGNIFICANT OBSERVATIONS

NONE OBSERVED

McNEIL ENGINEERING
Economic and Sustainable Designs, Professionals You Know and Trust
8610 South Sandy Parkway, Suite 200 Sandy, Utah 84070 801.255.7700 mcneilengineering.com
Civil Engineering • Consulting & Landscape Architecture
Structural Engineering • Land Surveying & HDS

RIVERDALE SUBDIVISION

4130 RIVERDALE RD.
OGDEN, UTAH

LOCATED IN THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, S.L.B.& M.

REVISIONS

REV	DATE	DESCRIPTION
△	2/01/22	RELEASE DRAFT COPY
△	11/10/22	RELEASE TO CLIENT FOR FINAL DRAFT
△		
△		
△		
△		
△		

PROJECT NO:	21812
CAD FILE:	21812 ALTA
DRAWN BY:	HMW
CALC BY:	DKW
FIELD CREW:	FIELD CREW
CHECKED BY:	CHECKED
DATE:	10/04/2022

ALTA/NSPS LAND TITLE SURVEY

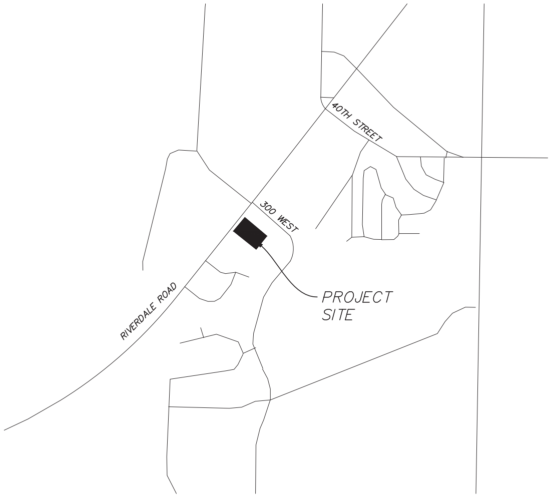
1 OF 1

S:\2021Files\21812\Survey\Prod Dwg\21812 ALTA.dwg Karl Nov 10, 2022 - 10:00am

PANERA BREAD
Commercial Development

4130 Riverdale Road
Riverdale, Utah 84405

OCTOBER 31, 2023



VICINITY MAP

CONTACT INFO

ENGINEER

PERIGEE CONSULTING
JED ATHERLEY
801.590.6611
JED@PERIGEECIVIL.COM

DEVLOPER

PANERA BREAD
PETER STRANGE
216.401.0030
PETERS@STRANGCORP.COM

LAND OWNER

WILLIAMSEN RIVERDALE LLC
THORN WILIAMSON
801.364.2602
THOM@CHASEBROOKCO.COM

APPROVING AGENCY

RIVERDALE CITY,
4600 So. WEBER RIVER DRIVE,
RIVERDALE, UTAH 84408

FIRE DEPARTMNET

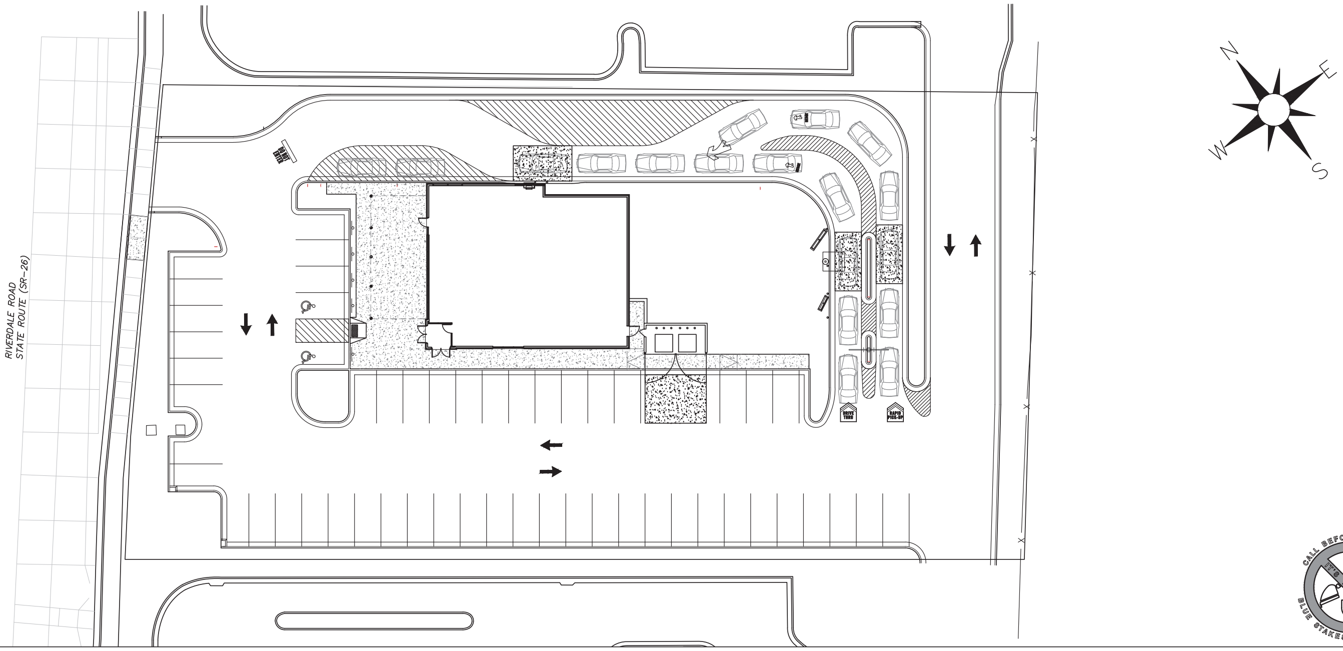
RIVERDALE CITY FIRE DEPARMTNET
RANDY KOGER
801.436.1241
RKOGER@RIVERDALECITY.COM

PUBLIC WORKS

RIVERDALE CITY PUBLIC WORKS
SHAWN DOUGLAS
801.394.5541 et 1217
SDOUGLAS@RIVERDALECITY.COM

SHEET LIST TABLE

Sheet Number	Sheet Title	Sheet Description
01	TC01	COVER SHEET
02	Alta	McNEIL ENGINEERING ALTA
03	Topo	TOPO
04	DM01	DEMO SHEET
05	SP01	SITE PLAN
06	UT01	UTILITY PLAN
07	GR01	GRADING PLAN
08	DR01	DRAINAGE PLAN
09	PP01	PLAN & PROFILE – STORM DRAIN
10	PP02	PLAN & PROFILE – STORM DRAIN
11	EC01	EROSION CONTROL
12	DT01	DETAILS
13	DT02	DETAILS
14	DT03	DETAILS
15	DT04	DETAIL SHEET
16	LP–101	PLANTING PLAN
17	LP–501	PLANTING DETAILS
18	LI–101	IRRIGATION PLAN
19	LI–501	IRRIGATION DETAILS
20	LI–502	IRRIGATION DETAILS
21	E1.1	IRRIGATION DETAILS



UDOT GENERAL NOTES:

1. All construction within the UDOT right–of–way shall conform to the most current UDOT standard (including supplemental) drawings and specifications.
2. The contractor is to obtain an encroachment permit from the applicable UDOT Region Permit office prior to commencing work within UDOT right–of–way. Working hour limitations will be listed in the limitations section of the encroachment permit.
3. UDOT reserves the right, at its option, to install a raised median island or restrict the access to a right–in or right–out at any time.
4. Owner, developer, and contractor are responsible for any damages directly or indirectly within the UDOT right–of–way as a result of development activities.
5. Owner, developer, and/or contractor is required to hire an independent company for all testing within the UDOT right–of–way.
6. All signs installed on the UDOT right–of–way must be high intensity grade (Type XI sheeting) with a B3 slip base. Install all signs per UDOT SN series Standard Drawings.
7. Comply with the requirements of Utah Code 17–23–14 (Disturbed Corners – County surveyor to be notified – Coordination with certain state agencies).

CALL BEFORE YOU DIG!
BLUE STAKES 1 800 662 4111

PRELIMINARY - NOT FOR CONSTRUCTION

PERIGEE
CONSULTING
CIVIL • STRUCTURAL • SURVEY
9089 SOUTH 1300 WEST, SUITE 160
WEST JORDAN, UT 84088
801.628.6004 TEL 801.590.6611 FAX
WWW.PERIGEECIVIL.COM

RIVERDALE CITY

CITY ENGINEER DATE

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RN
DATE: OCTOBER 2023
REV:
DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\01 TC01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:15:06 AM

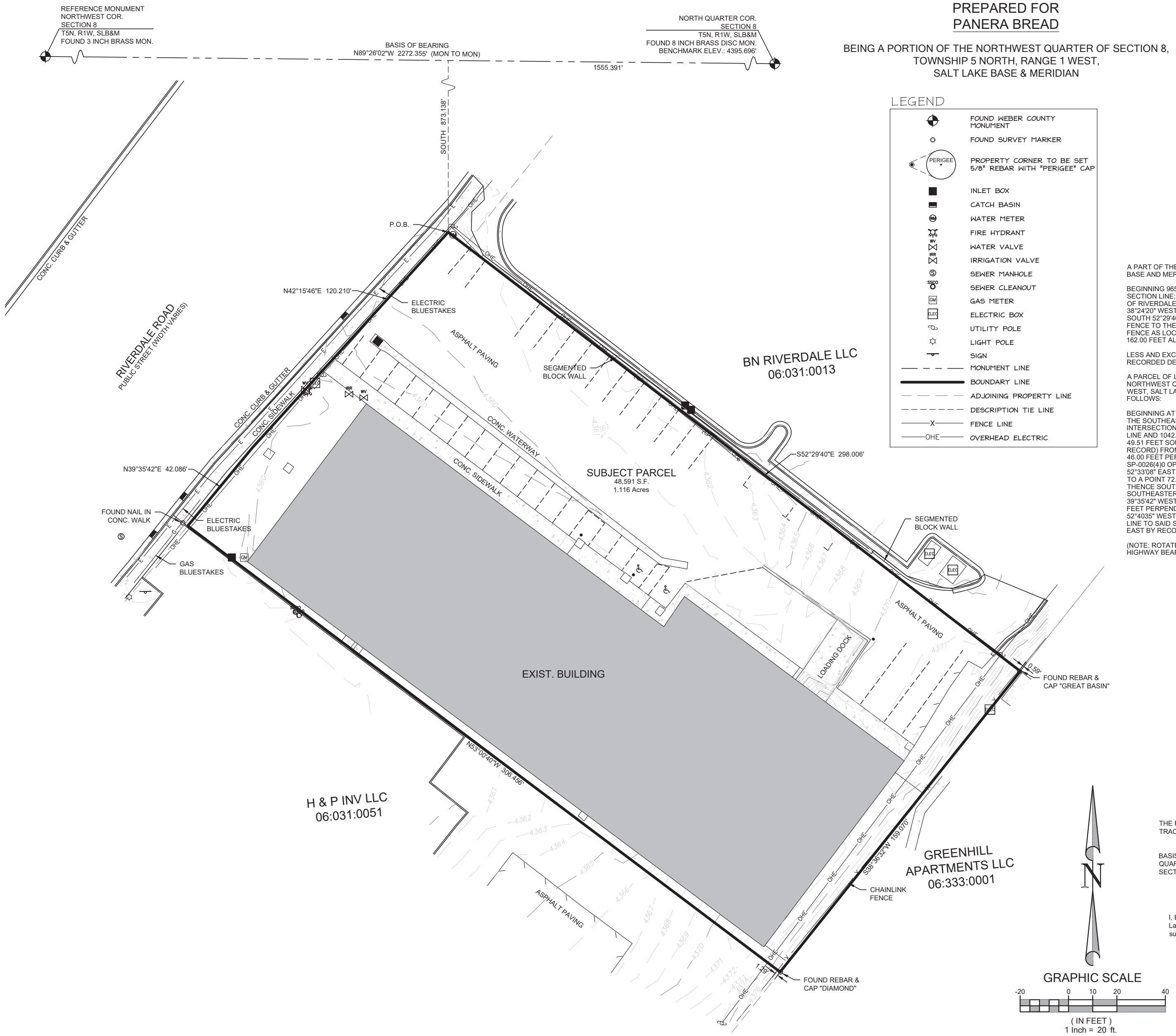
RIVERDALE CITY
PANERA BREAD
COVER SHEET

SHEET NUMBER
01
OF 21 SHEETS
DRAWING NAME
TC01

10/31/2023 8:15:06 AM

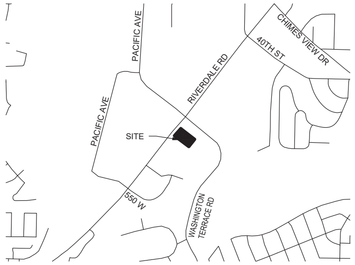
BOUNDARY/TOPOGRAPHY SURVEY
PREPARED FOR
PANERA BREAD

BEING A PORTION OF THE NORTHWEST QUARTER OF SECTION 8,
TOWNSHIP 5 NORTH, RANGE 1 WEST,
SALT LAKE BASE & MERIDIAN



LEGEND

⊕	FOUND WEBER COUNTY MONUMENT
○	FOUND SURVEY MARKER
◉ PERIGEE	PROPERTY CORNER TO BE SET 5/8" REBAR WITH "PERIGEE" CAP
■	INLET BOX
▬	CATCH BASIN
WM	WATER METER
☼	FIRE HYDRANT
WV ⋈	WATER VALVE
IRR ⋈	IRRIGATION VALVE
Ⓢ	SEWER MANHOLE
SSCO ○	SEWER CLEANOUT
GM	GAS METER
ELEC	ELECTRIC BOX
∞	UTILITY POLE
☼	LIGHT POLE
⊤	SIGN
—— — — ——	MONUMENT LINE
━━━━	BOUNDARY LINE
— — — —	ADJOINING PROPERTY LINE
- - - - - -	DESCRIPTION TIE LINE
——X——	FENCE LINE
——OHE——	OVERHEAD ELECTRIC



VICINITY MAP

N.T.S.

AS-PROVIDED DESCRIPTION

A PART OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY:

BEGINNING 965.42 FEET (957.54 ORIGINAL DEED) NORTH 89°26'02" WEST (STATE PLANE) ALONG THE SECTION LINE; 1039.34 FEET (1048.52 ORIGINAL DEED) SOUTH 38°24'20" WEST ALONG THE CENTERLINE OF RIVERDALE ROAD; 49.51 FEET (49.52 ORIGINAL DEED) SOUTH 52°29'40" EAST AND 8.00 FEET SOUTH 38°24'20" WEST FROM THE NORTHEAST CORNER OF SAID QUARTER SECTION; AND RUNNING THENCE SOUTH 52°29'40" EAST 325.00 FEET TO A FENCE; THENCE SOUTH 38°36'32" WEST 159.07 FEET ALONG SAID FENCE TO THE LOCATION OF A FENCE IN 1977; THENCE NORTH 53°00'40" WEST 324.50 FEET ALONG SAID FENCE AS LOCATED IN 1977 TO THE EASTERLY LINE OF RIVERDALE ROAD; THENCE NORTH 38°2420" EAST 162.00 FEET ALONG SAID EASTERLY LINE TO THE POINT OF BEGINNING.

LESS AND EXCEPTING THAT PORTION OF LAND AS SET FORTH IN FINAL ORDER OF CONDEMNATION RECORDED DECEMBER 16, 2016 AS ENTRY NO. 2832539 OF OFFICIAL RECORDS.

A PARCEL OF LAND IN FEE, BEING A PART OF AN ENTIRE TRACT OF PROPERTY, SITUATE IN THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 5 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN. THE BOUNDARIES OF SAID PARCEL OF LAND ARE DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY BOUNDARY LINE OF SAID ENTIRE TRACT AND THE SOUTHEASTERLY RIGHT OF WAY LINE OF THE EXISTING HIGHWAY STATE ROUTE 26, SAID INTERSECTION IS 964.45 FEET (965.42 FEET BY RECORD) NORTH 89°26'02" WEST ALONG THE SECTION LINE AND 1042.88 FEET SOUTH 38°26'56" WEST, (1039.34 FEET SOUTH 38°2420" WEST BY RECORD) AND 49.51 FEET SOUTH 52029140" EAST AND 8.00 FEET SOUTH 38°2656" WEST (SOUTH 38°2420" WEST BY RECORD) FROM THE NORTHEAST CORNER OF SAID QUARTER SECTION, SAID INTERSECTION IS ALSO 46.00 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM THE CONTROL LINE OF SAID PROJECT SP-0026(4)0 OPPOSITE APPROXIMATE ENGINEER STATION 151+46.19, AND RUNNING THENCE SOUTH 52°33'08" EAST (SOUTH 52°29'40" EAST BY RECORD) 26.88 FEET ALONG SAID NORTHERLY BOUNDARY LINE TO A POINT 72.87 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE; THENCE SOUTH 42°15'46" WEST 120.21 FEET TO A POINT 64.88 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE OPPOSITE ENGINEER STATION 150+26.72; THENCE SOUTH 39°35'42" WEST 42.19 FEET TO THE SOUTHERLY BOUNDARY LINE OF SAID ENTIRE TRACT AT A POINT 64.03 FEET PERPENDICULARLY DISTANT SOUTHEASTERLY FROM SAID CONTROL LINE; THENCE NORTH 52°4035" WEST (NORTH 53°00'40" WEST BY RECORD) 18.04 FEET ALONG SAID SOUTHERLY BOUNDARY LINE TO SAID SOUTHEASTERLY RIGHT OF WAY LINE; THENCE NORTH 38°26'56' EAST (NORTH 38°2420" EAST BY RECORD) 162.01 FEET ALONG SAID RIGHT OF WAY LINE TO THE POINT OF BEGINNING.

(NOTE: ROTATE ALL BEARINGS IN THE ABOVE DESCRIPTION 0°0024" COUNTERCLOCKWISE TO OBTAIN HIGHWAY BEARINGS.)

NARRATIVE:

THE PURPOSE OF THIS SURVEY IS TO ESTABLISH ON THE GROUND THE HEREON DESCRIBED TRACT OF LAND FOR FUTURE CONSTRUCTION.

BASIS OF BEARINGS IS NORTH 89°26'02" WEST 2272.355 FEET BETWEEN THE NORTH QUARTER CORNER AND THE REFERENCE MONUMENT TO THE NORTHWEST CORNER OF SECTION 8, T5N, R1W, SALT LAKE BASE & MERIDIAN

SURVEYOR'S CERTIFICATE

I, Eric D. Robins, depose and say that I am a Professional Land Surveyor as prescribed by Utah State Law and that I hold certificate no. 5152671. I further state that the property described above was surveyed under my direct supervision and the results of that survey are depicted hereon.

5152671
ERIC D.
ROBINS
10/02/23

ERIC D. ROBINS P.L.S. 5152671
STATE OF UTAH
PERIGEE CONSULTING
9089 SOUTH 1300 WEST SUITE 160
WEST JORDAN, UTAH 84088

PERIGEE
CONSULTING
CIVIL • STRUCTURAL • SURVEY
9089 SOUTH 1300 WEST, SUITE 160 WEST JORDAN, UT 84088
801.628.6004 TEL 801.590.6611 FAX WWW.PERIGEECIVIL.COM

CITY ENGINEER DATE

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: MB	DATE:		REV:
DWN BY:	CKD BY:	SOLICITATION NO:	
SUBMITTED BY:		CONTRACT NO:	
FILE NAME:			
SIZE: ANSI D	PLOTTED BY:	PLOT DATE:	

BOUNDARY/TOPOGRAPHY
SURVEY PREPARED FOR
PANERA BREAD

SHEET NUMBER
1 OF 1

DRAWING NAME
SURVEY

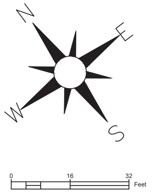
N:\00909 Panera Riverdale\Survey\dwg\00909 Panera Riverdale Boundary Topo WES.dwg, 10/2/2023 12:13:15 PM, DWG To PDF.pc3

LEGEND

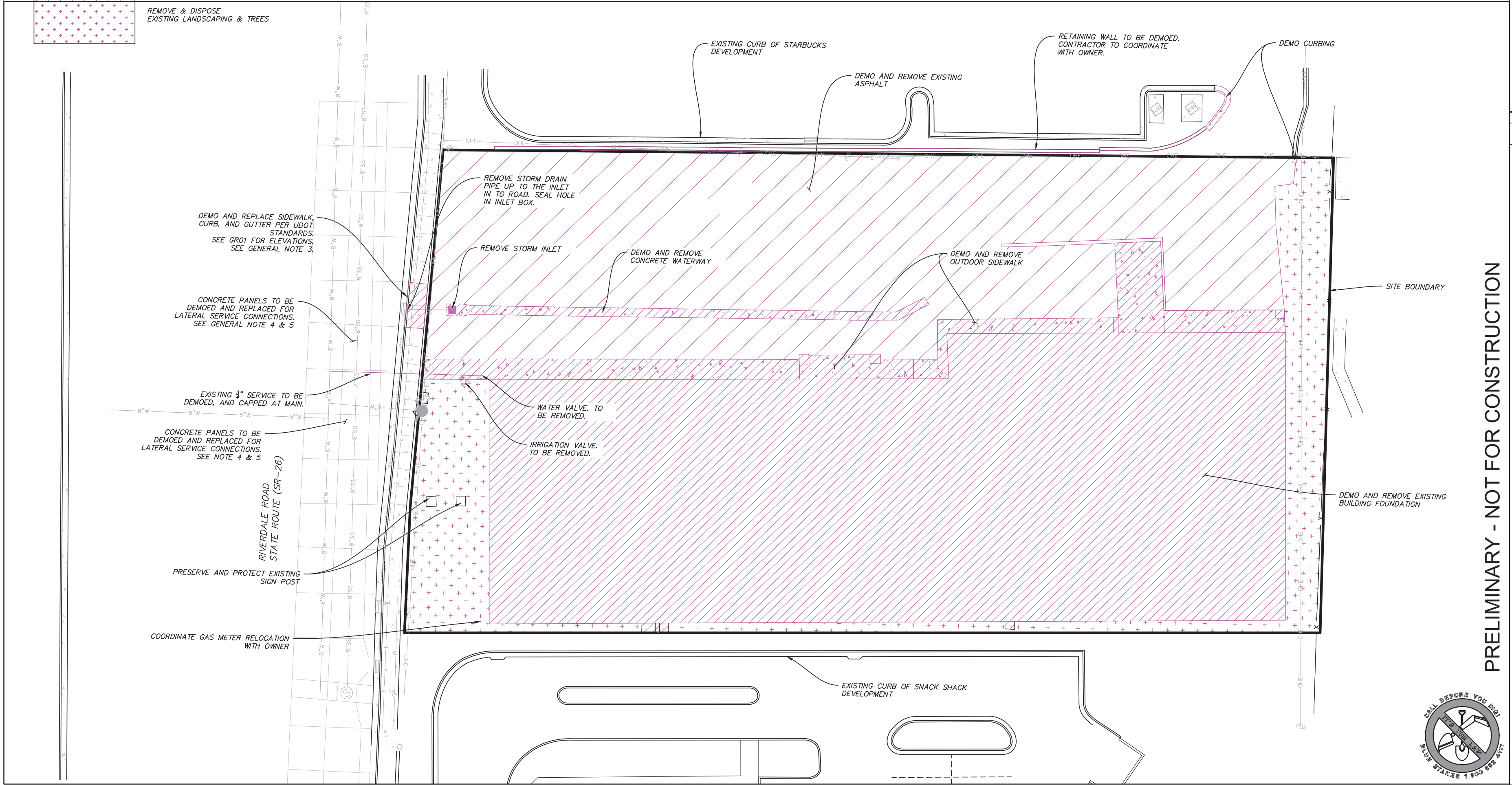
▨	REMOVE & DISPOSE EXISTING ASPHALT
▩	REMOVE & DISPOSE EXISTING CURB
▨	REMOVE & DISPOSE EXISTING SIDEWALK
+	REMOVE & DISPOSE EXISTING LANDSCAPING & TREES

GENERAL NOTES:

1. DEMO EXISTING SEWER LATERAL. DISCONNECT LATERAL AT THE MAIN PER RIVERDALE CITY STANDARDS.
2. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC
3. CONCRETE WALKS TO BE 4" CONCRETE OVER 4" ROADBASE UNLESS IN DRIVE APPROACH THEN 6" CONCRETE OVER 6" ROADBASE. SEE RIVERDALE CITY CONSTRUCTION & DEVELOPMENT STANDARDS SHEET 3 DETAIL 1.
4. CONCRETE REPLACED TO BE 11" OF RAPID STRENGTH CONCRETE (RCS) FOR ALL PANEL REPLACEMENTS IN TRAVEL LANES ACCORDING TO UDOT SPECIFICATION 03058 RAPID STRENGTH CONCRETE (RSC) AND OTHER RELATED SECTIONS OVER 3 INCHES OF UDOT– APPROVED HOT MIX ASPHALT (HMA), PG–GRADE 64–34 ASPHALT BINDER, 1/2 INCH NOMINAL MAX, 7–75–115 GYRATION PER UDOT STANDARD SPECIFICATION 02741; OVER 6 INCHES UNTREATED BASE COURSE (UTBC) PER UDOT SPECIFICATION 02721; OR MATCH EXISTING (WHICHEVER IS GREATER). PROVIDE DOCUMENTATION OF COMPACTION FROM A UDOT–QUALIFIED LABORATORY.
5. USE TRECHLESS CONSTRUCTION FOR LATERAL WHERE POSSIBLE TO AVOID NEEDING TO REPLACE CONCRETE PANELS IN RIVERDALE ROAD



DEMO PLAN FOR EXISTING SITE


EXISTING CURB OF STARBUCKS DEVELOPMENT
DEMO AND REMOVE EXISTING ASPHALT
RETAINING WALL TO BE DEMOED. CONTRACTOR TO COORDINATE WITH OWNER.
DEMO CURBING
REMOVE STORM DRAIN PIPE UP TO THE INLET IN TO ROAD. SEAL HOLE IN INLET BOX.
DEMO AND REPLACE SIDEWALK, CURB, AND GUTTER PER UDOT STANDARDS. SEE GR01 FOR ELEVATIONS. SEE GENERAL NOTE 3.
REMOVE STORM INLET
DEMO AND REMOVE CONCRETE WATERWAY
DEMO AND REMOVE OUTDOOR SIDEWALK
SITE BOUNDARY
CONCRETE PANELS TO BE DEMOED AND REPLACED FOR LATERAL SERVICE CONNECTIONS. SEE GENERAL NOTE 4 & 5
EXISTING ¾" SERVICE TO BE DEMOED, AND CAPPED AT MAIN.
WATER VALVE. TO BE REMOVED.
CONCRETE PANELS TO BE DEMOED AND REPLACED FOR LATERAL SERVICE CONNECTIONS. SEE NOTE 4 & 5
IRRIGATION VALVE. TO BE REMOVED.
RIVERDALE ROAD STATE ROUTE (SR-26)
DEMO AND REMOVE EXISTING BUILDING FOUNDATION
PRESERVE AND PROTECT EXISTING SIGN POST
COORDINATE GAS METER RELOCATION WITH OWNER
EXISTING CURB OF SNACK SHACK DEVELOPMENT
8"W
8"SS
OHE
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RIVERDALE CITY

CITY ENGINEER DATE

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RN	DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	SOLICITATION NO:
SUBMITTED BY:		CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\04 DM01		
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:15:25 AM

RIVERDALE CITY
PANERA BREAD
DEMO SHEET

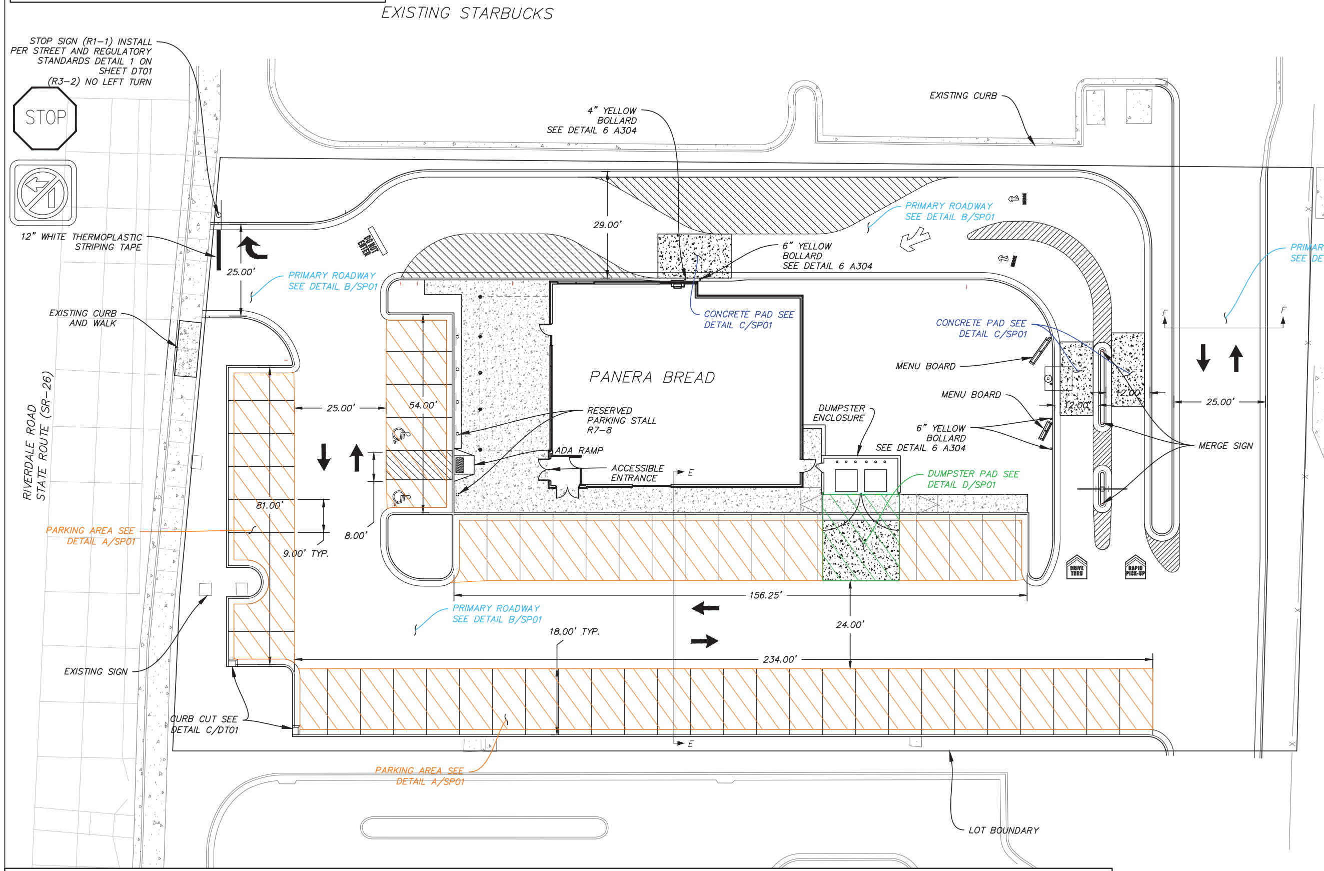
SHEET NUMBER
04
OF 21 SHEETS
DRAWING NAME
DM01

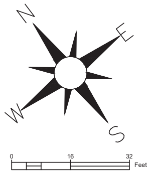
ROADWAY SECTION NOTES:
1. CONTRACTOR TO COMPLY WITH THE RECOMMENDATIONS PROVIDED BY GORDON GEOTECHNICAL REPORT (PROJECT # 748-002-23) FOR THIS PROJECT REGARDING SITE PREPARATION, GRADING, COMPACTION ETC.

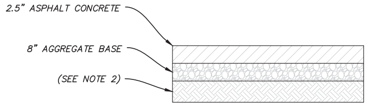
2. SEE GEOTECH REPORT FOR SUBSOIL PREPARATION.

3. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.

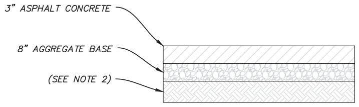
4. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS


EXISTING STARBUCKS
STOP SIGN (R1-1) INSTALL PER STREET AND REGULATORY STANDARDS DETAIL 1 ON SHEET DT01
(R3-2) NO LEFT TURN
STOP
12" WHITE THERMOPLASTIC STRIPING TAPE
25.00'
PRIMARY ROADWAY SEE DETAIL B/SP01
EXISTING CURB AND WALK
RIVERDALE ROAD STATE ROUTE (SR-26)
PARKING AREA SEE DETAIL A/SP01
EXISTING SIGN
CURB CUT SEE DETAIL C/DT01
PARKING AREA SEE DETAIL A/SP01
4" YELLOW BOLLARD SEE DETAIL 6 A304
29.00'
6" YELLOW BOLLARD SEE DETAIL 6 A304
EXISTING CURB
PRIMARY ROADWAY SEE DETAIL B/SP01
CONCRETE PAD SEE DETAIL C/SP01
PANERA BREAD
RESERVED PARKING STALL R7-8
ADA RAMP
ACCESSIBLE ENTRANCE
25.00'
54.00'
81.00'
8.00'
9.00' TYP.
DUMPSTER ENCLOSURE
DUMPSTER PAD SEE DETAIL D/SP01
CONCRETE PAD SEE DETAIL C/SP01
MENU BOARD
MENU BOARD
6" YELLOW BOLLARD SEE DETAIL 6 A304
MERGE SIGN
12.00'
12.00'
25.00'
PRIMARY ROADWAY SEE DETAIL B/SP01
DRIVE THRU
RAPID PICK-UP
156.25'
PRIMARY ROADWAY SEE DETAIL B/SP01
18.00' TYP.
24.00'
234.00'
E
E
F
F
LOT BOUNDARY

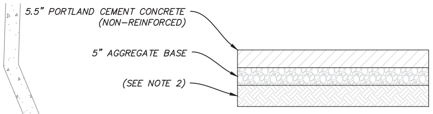




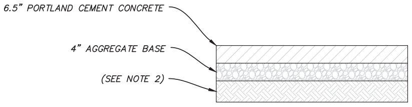
A SP01 PARKING AREAS (FLEXIBLE)
SCALE: N.T.S.



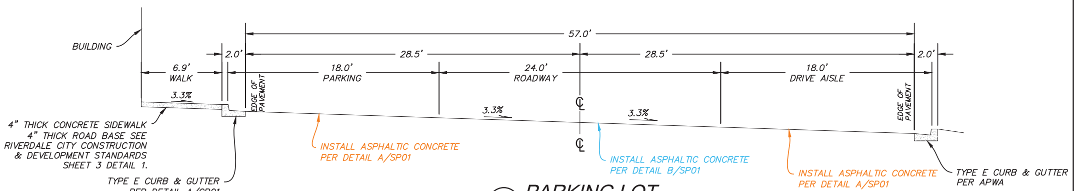
B SP01 PRIMARY ROADWAY AREAS (FLEXIBLE)
SCALE: N.T.S.



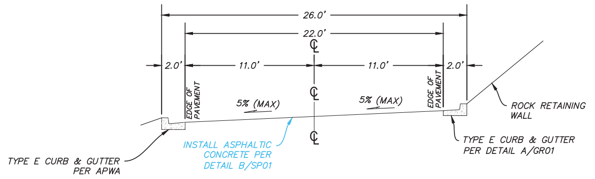
C SP01 PRIMARY ROADWAY AREAS (RIGID)
SCALE: N.T.S.



D SP01 DUMPSTER PAD (RIGID)
SCALE: N.T.S.


BUILDING
57.0'
2.0'
28.5'
28.5'
2.0'
6.9' WALK
18.0' PARKING
24.0' ROADWAY
18.0' DRIVE AISLE
3.3%
EDGE OF PAVEMENT
3.3%
3.3%
EDGE OF PAVEMENT
℄
℄
4" THICK CONCRETE SIDEWALK 4" THICK ROAD BASE SEE RIVERDALE CITY CONSTRUCTION & DEVELOPMENT STANDARDS SHEET 3 DETAIL 1.
TYPE E CURB & GUTTER PER DETAIL A/GR01
INSTALL ASPHALTIC CONCRETE PER DETAIL A/SP01
INSTALL ASPHALTIC CONCRETE PER DETAIL B/SP01
INSTALL ASPHALTIC CONCRETE PER DETAIL A/SP01
TYPE E CURB & GUTTER PER APWA

E SP01 PARKING LOT
SCALE: 1" = 5'


26.0'
22.0'
2.0'
11.0'
11.0'
2.0'
℄
EDGE OF PAVEMENT
5% (MAX)
5% (MAX)
EDGE OF PAVEMENT
℄
℄
ROCK RETAINING WALL
TYPE E CURB & GUTTER PER DETAIL A/GR01
TYPE E CURB & GUTTER PER APWA
INSTALL ASPHALTIC CONCRETE PER DETAIL B/SP01

F SP01 ACCESS ROAD
SCALE: 1" = 5'

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RIVERDALE CITY
CITY ENGINEER DATE

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RN
DATE: OCTOBER 2023
REV:
DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\05 SP01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:15:39 AM

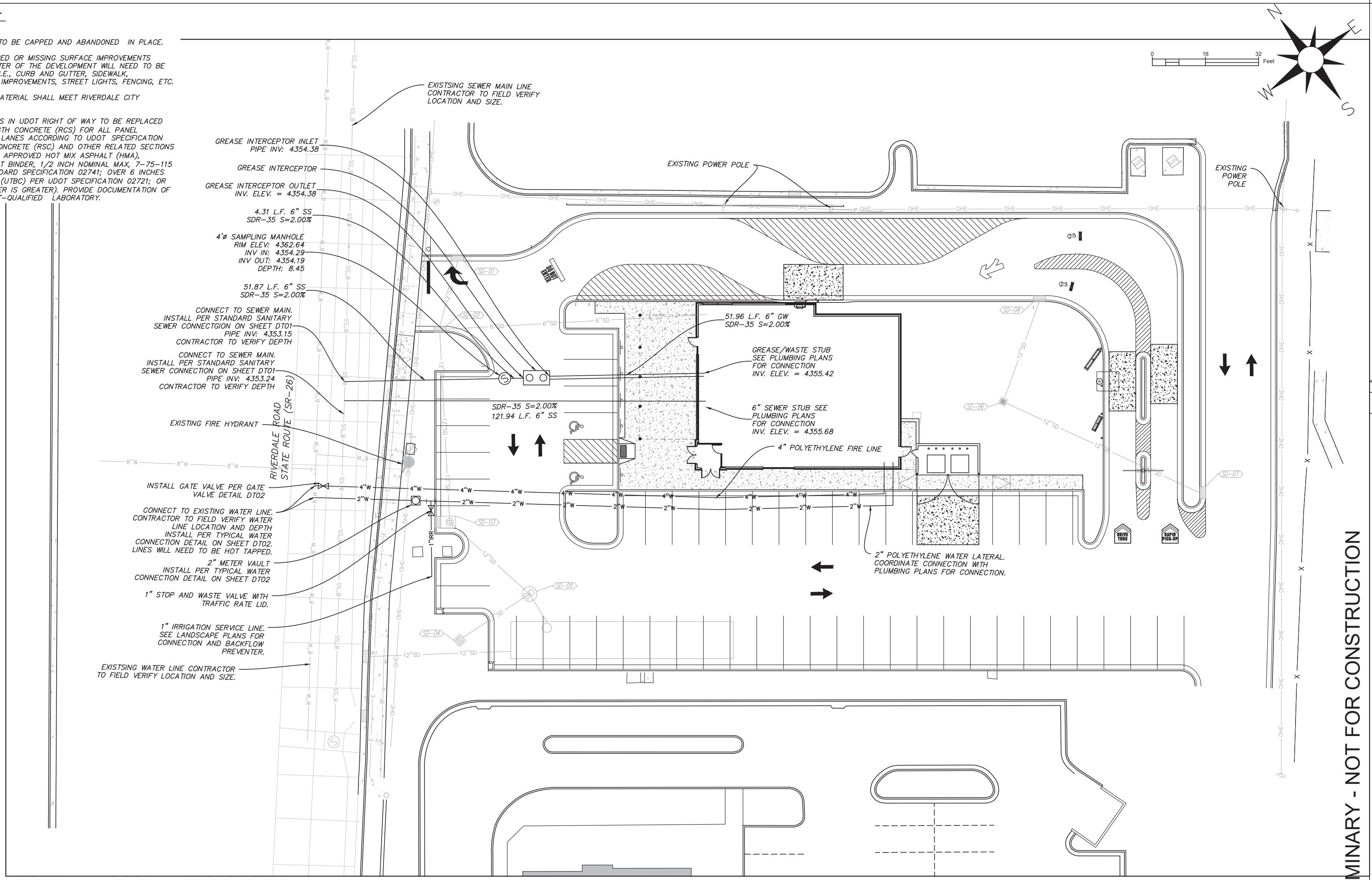
RIVERDALE CITY
PANERA BREAD
SITE PLAN

SHEET NUMBER
05
OF 21 SHEETS
DRAWING NAME
SP01

10/31/2023 8:15:39 AM

GENERAL NOTES:

1. EXISTING SEWER LATERAL TO BE CAPPED AND ABANDONED IN PLACE.
2. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.
3. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS
4. FOR ALL CONCRETE PANELS IN UDOT RIGHT OF WAY TO BE REPLACED WITH 11" OF RAPID STRENGTH CONCRETE (RCS) FOR ALL PANEL REPLACEMENTS IN TRAVEL LANES ACCORDING TO UDOT SPECIFICATION 03058 RAPID STRENGTH CONCRETE (RSC) AND OTHER RELATED SECTIONS OVER 3 INCHES OF UDOT– APPROVED HOT MIX ASPHALT (HMA), PG–GRADE 64–34 ASPHALT BINDER, 1/2 INCH NOMINAL MAX, 7–75–115 GYRATION PER UDOT STANDARD SPECIFICATION 02741; OVER 6 INCHES UNTREATED BASE COURSE (UTBC) PER UDOT SPECIFICATION 02721; OR MATCH EXISTING (WHICHEVER IS GREATER). PROVIDE DOCUMENTATION OF COMPACTION FROM A UDOT–QUALIFIED LABORATORY.


EXISTSING SEWER MAIN LINE CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE.
GREASE INTERCEPTOR INLET PIPE INV: 4354.38
GREASE INTERCEPTOR
GREASE INTERCEPTOR OUTLET INV. ELEV. = 4354.38
4.31 L.F. 6" SS SDR–35 S=2.00%
4'Ø SAMPLING MANHOLE RIM ELEV: 4362.64 INV IN: 4354.29 INV OUT: 4354.19 DEPTH: 8.45
51.87 L.F. 6" SS SDR–35 S=2.00%
CONNECT TO SEWER MAIN. INSTALL PER STANDARD SANITARY SEWER CONNECTGION ON SHEET DT01 PIPE INV: 4353.15 CONTRACTOR TO VERIFY DEPTH
CONNECT TO SEWER MAIN. INSTALL PER STANDARD SANITARY SEWER CONNECTION ON SHEET DT01 PIPE INV: 4353.24 CONTRACTOR TO VERIFY DEPTH
EXISTING FIRE HYDRANT
RIVERDALE ROAD STATE ROUTE (SR–26)
INSTALL GATE VALVE PER GATE VALVE DETAIL DT02
CONNECT TO EXISTING WATER LINE. CONTRACTOR TO FIELD VERIFY WATER LINE LOCATION AND DEPTH INSTALL PER TYPICAL WATER CONNECTION DETAIL ON SHEET DT02. LINES WILL NEED TO BE HOT TAPPED.
2" METER VAULT INSTALL PER TYPICAL WATER CONNECTION DETAIL ON SHEET DT02
1" STOP AND WASTE VALVE WITH TRAFFIC RATE LID.
1" IRRIGATION SERVICE LINE. SEE LANDSCAPE PLANS FOR CONNECTION AND BACKFLOW PREVENTER.
EXISTSING WATER LINE CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE.
EXISTING POWER POLE
EXISTING POWER POLE
51.96 L.F. 6" GW SDR–35 S=2.00%
GREASE/WASTE STUB SEE PLUMBING PLANS FOR CONNECTION INV. ELEV. = 4355.42
SDR–35 S=2.00% 121.94 L.F. 6" SS
6" SEWER STUB SEE PLUMBING PLANS FOR CONNECTION INV. ELEV. = 4355.68
4" POLYETHYLENE FIRE LINE
2" POLYETHYLENE WATER LATERAL. COORDINATE CONNECTION WITH PLUMBING PLANS FOR CONNECTION.
DO NOT ENTER
DRIVE THRU
RAPID PICK-UP
SD-01
SD-02
SD-03
SD-04
SD-05
SD-06
SD-07
SD-08
4"W
2"W
1"IRR
8"W
8"SS
6"SD
12"SD
OHE
0
16
32
Feet
N
E
S
W

UTILITY SYMBOL LEGEND

FIRE HYDRANT	▼●
WATER FITTINGS	◇ ¦
WALK DOME	▨
SS MANHOLE	(SS)
WATER METER	▣
VALVE	⋈
INLET	▤
SD MANHOLE	(DD)
STOP SIGN	—o—
COMBO BOX	Ⓓ▤

UTILITY LINETYPE LEGEND

DOMESTIC WATER	—— #"W ——
SANITARY SEWER	—— #"SS ——
GREASE VENT	—— #"V ——
STORM DRAIN	—— #"SD ——
EXISTING DOMESTIC WATER	—— #"W ——
EXISTING SANITARY SEWER	—— #"SS ——
EXISTING STORM DRAIN	—— #"SD ——
EASEMENT	— — — — — —

10/31/2023 8:15:50 AM

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RIVERDALE CITY

CITY ENGINEER DATE

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DESIGNED BY: RN		DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	SOLICITATION NO:	
SUBMITTED BY:		CONTRACT NO: 00909	
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\08 DR01			
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:15:50 AM	

RIVERDALE CITY
PANERA BREAD
UTILITY PLAN

SHEET NUMBER
06
OF 21 SHEETS
DRAWING NAME
UT01

LEGEND:

🟪	SPILL CURB SEE DETAIL A/DT01
▨	TRANSITION FROM CATCH TO SPILL CURB

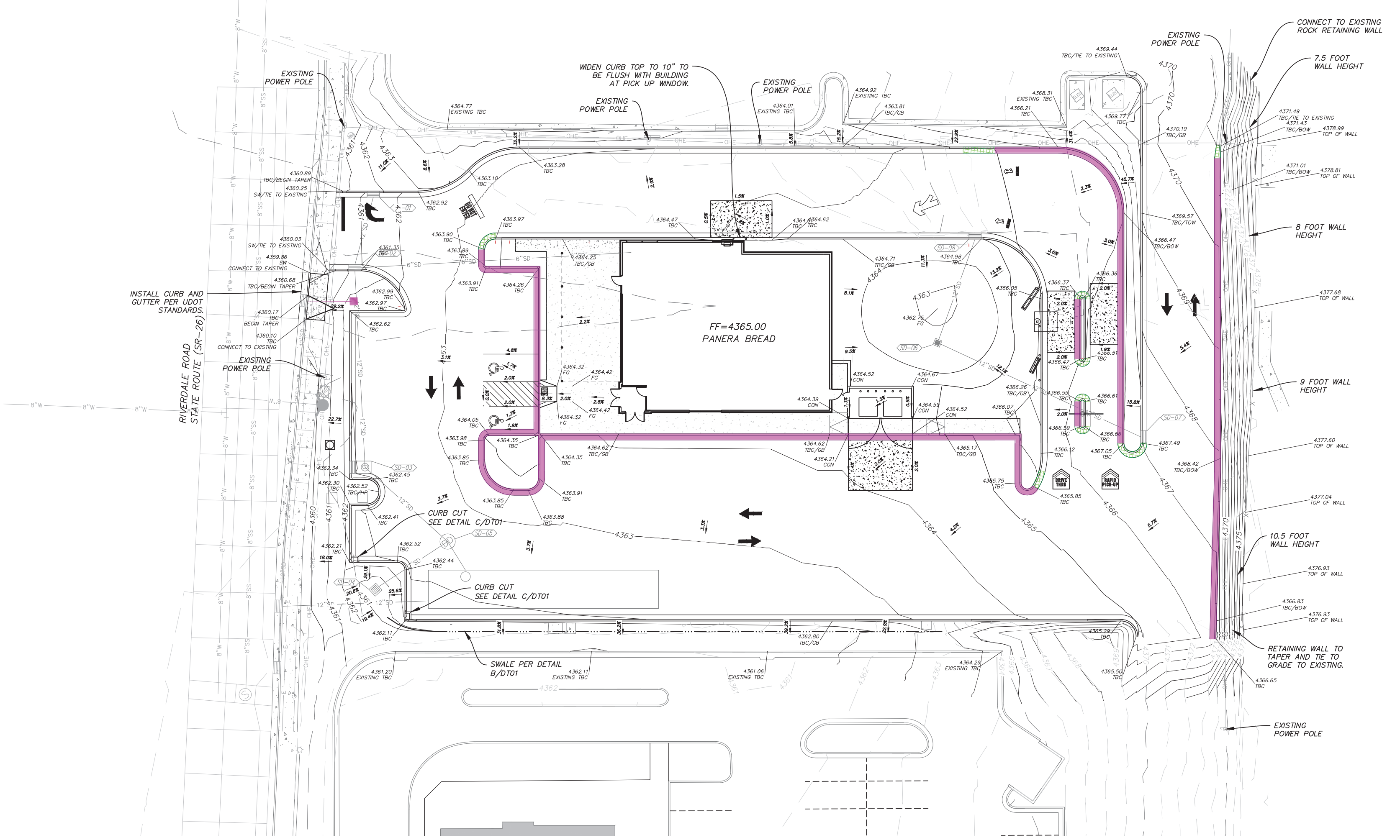
GENERAL NOTES:

1. ALL CURB TO BE APWA TYPE E UNLESS OTHERWISE NOTED SEE DETAIL DT01 FOR DETAIL OF CURB AND GUTTER.

2. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.

3. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS

4. TOTAL IMPERVIOUS AREA 37,938 FT2



N
E
S
W

0 16 32 Feet

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RIVERDALE CITY

CITY ENGINEER	DATE

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DESIGNED BY: RN	DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	
SUBMITTED BY:	SOLICITATION NO:	
	CONTRACT NO: 00909	
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\07 GR01		
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:16:07 AM

RIVERDALE CITY
PANERA BREAD
GRADING PLAN

SHEET NUMBER
07
OF 21 SHEETS
DRAWING NAME
GR01

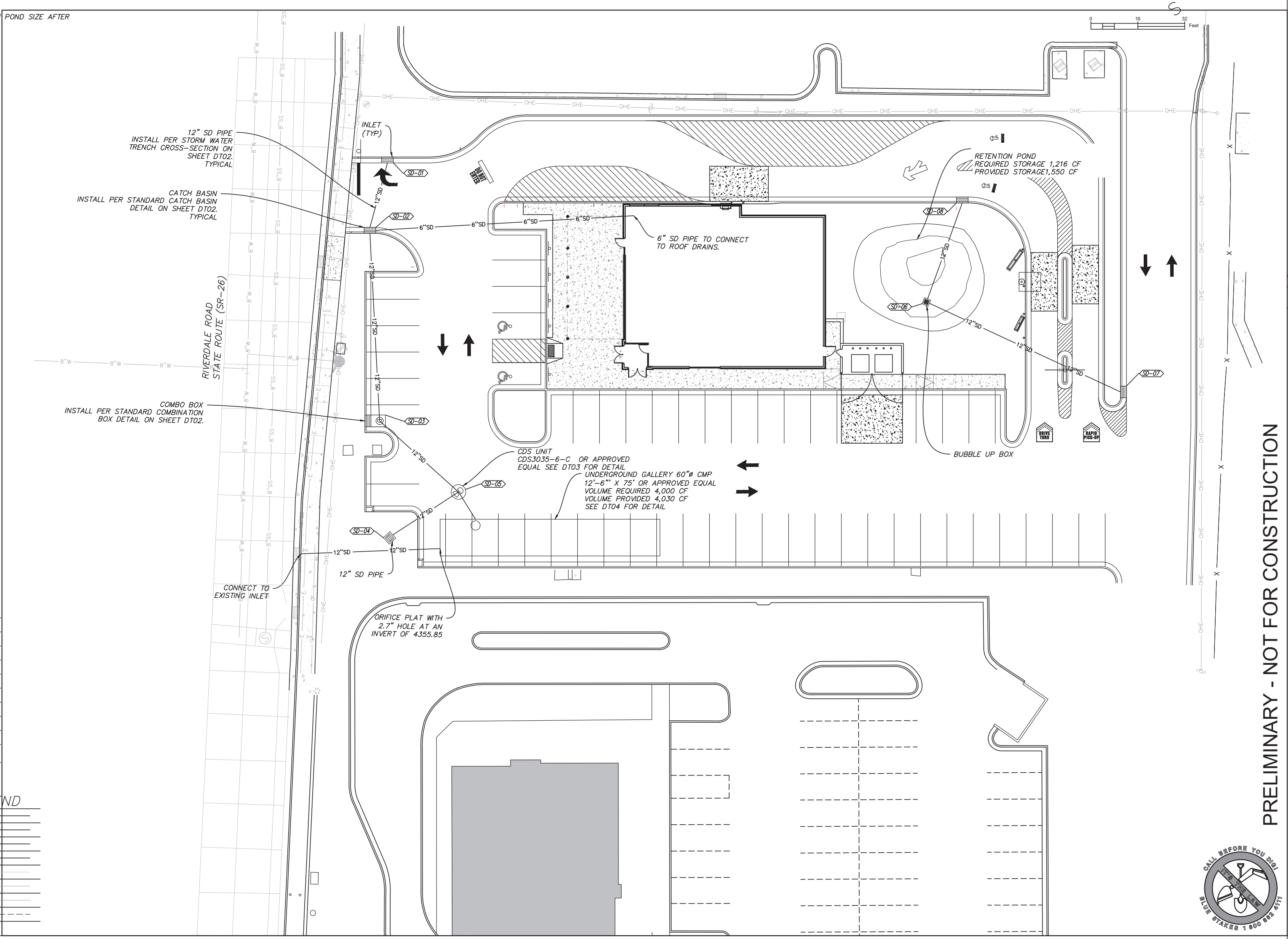
10/31/2023 8:16:07 AM

GENERAL NOTES:

1. EXISTING SEWER LATERAL TO BE CAPPED AND ABANDONED IN PLACE.
2. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.
3. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS
4. CERTIFY GALLERY STRUCTURE AND RETENTION POND SIZE AFTER CONSTRUCTION

STORM DRAIN CALCULATIONS

	IMPERVIOUS (%)	50YR 24YR RUNOFF (CF)	STORAGE VOLUME REQUIRED(CF)	STORAGE VOLUME PROVIDED (CF)	WQV CAPTURED (%)	10yr 24hr DISCHARAGE TO RIVERDALE ROAD
EXISTING CONDITIONS	90	N/A	N/A	0	0	NO RESTRICTION
PANERA DEVELOPMENT	78	8,670 CF	5216	5582	100	RESTRICTED TO 0.2cfs/ac



0 16 32 Feet
12" SD PIPE INSTALL PER STORM WATER TRENCH CROSS-SECTION ON SHEET DT02. TYPICAL
INLET (TYP)
CATCH BASIN INSTALL PER STANDARD CATCH BASIN DETAIL ON SHEET DT02. TYPICAL
SD-01
SD-02
SD-03
SD-04
SD-05
SD-06
SD-07
SD-08
6"SD
12"SD
6" SD PIPE TO CONNECT TO ROOF DRAINS.
RETENTION POND REQUIRED STORAGE 1,216 CF PROVIDED STORAGE1,550 CF
RIVERDALE ROAD STATE ROUTE (SR-26)
COMBO BOX INSTALL PER STANDARD COMBINATION BOX DETAIL ON SHEET DT02.
CDS UNIT CDS3035-6-C OR APPROVED EQUAL SEE DT03 FOR DETAIL
UNDERGROUND GALLERY 60"Ø CMP 12'-6" X 75' OR APPROVED EQUAL VOLUME REQUIRED 4,000 CF VOLUME PROVIDED 4,030 CF SEE DT04 FOR DETAIL
BUBBLE UP BOX
12" SD PIPE
CONNECT TO EXISTING INLET
ORIFICE PLAT WITH 2.7" HOLE AT AN INVERT OF 4355.85
DRIVE THRU
RAPID PICK-UP
OHE
8"W
8"SS

UTILITY SYMBOL LEGEND

FIRE HYDRANT	▼
WATER FITTINGS	◌
WALK DOME	▬
SS MANHOLE	Ⓢ
WATER METER	▢
VALVE	⋈
INLET	▬
SD MANHOLE	Ⓓ
STOP SIGN	⊸
COMBO BOX	▣

UTILITY LINETYPE LEGEND

DOMESTIC WATER	—#"W—
SANITARY SEWER	—#"SS—
GREASE VENT	—#"V—
STORM DRAIN	—#"SD—
EXISTING DOMESTIC WATER	—#"W—
EXISTING SANITARY SEWER	—#"SS—
EXISTING STORM DRAIN	—#"SD—
EASEMENT	— — — — — —

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RIVERDALE CITY

CITY ENGINEER	DATE

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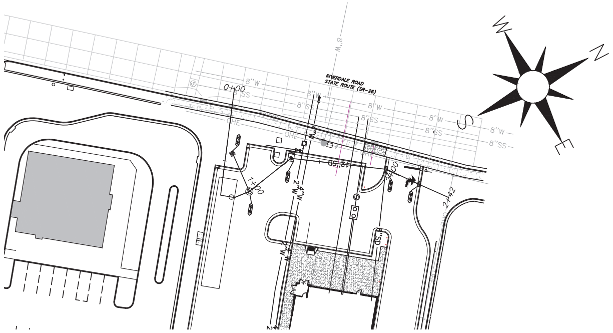
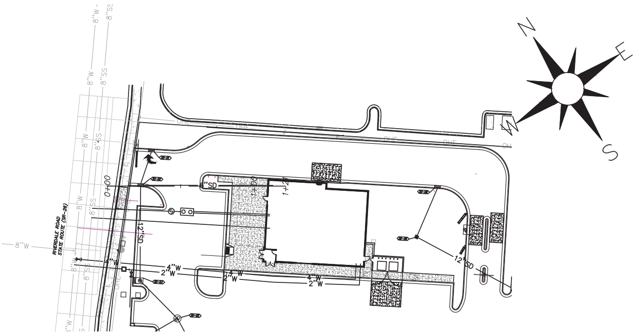
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:16:18 AM

RIVERDALE CITY
PANERA BREAD
DRAINAGE PLAN

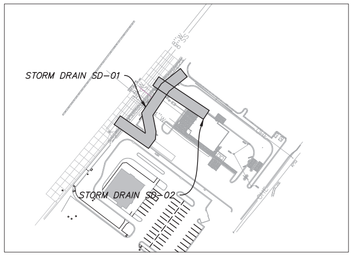
SHEET NUMBER
08
OF 21 SHEETS
DRAWING NAME
DR01

RIVERDALE ROAD





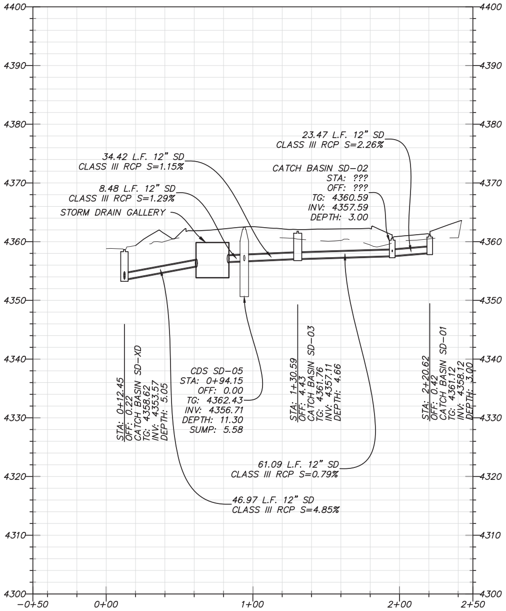
0 40 80 Feet



KEY MAP

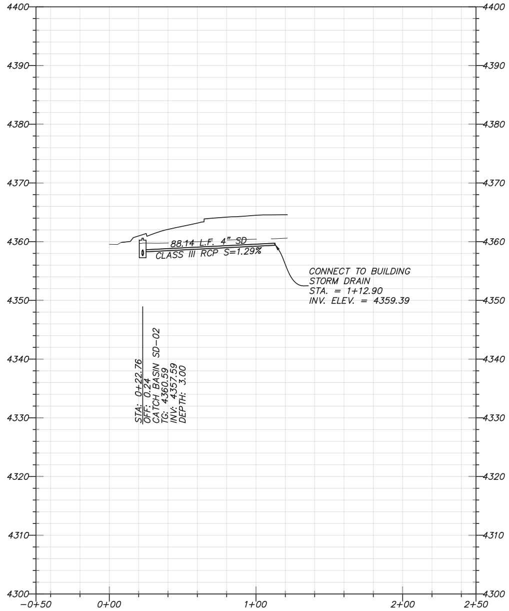
STORM DRAIN SD-01

STA: -0+50 TO 2+50



STORM DRAIN SD-02

STA: -0+50 TO 2+50



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RIVERDALE CITY

CITY ENGINEER	DATE

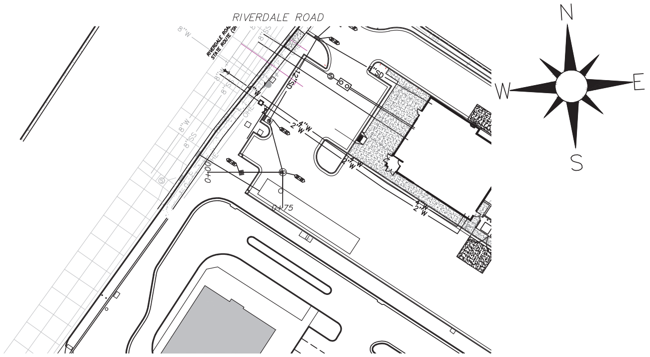
MARK	DESCRIPTION	DATE	APPR.

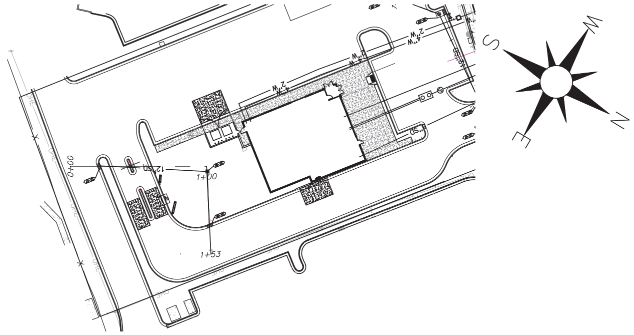
DESIGNED BY: RN		DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	SOLICITATION NO:	
SUBMITTED BY:		CONTRACT NO: 00909	
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\10 PP02			
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:16:32 AM	

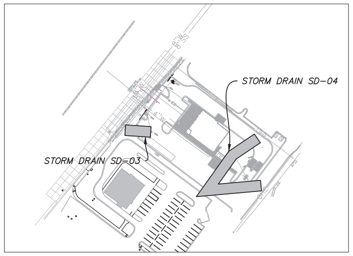
RIVERDALE CITY
PANERA BREAD
PLAN & PROFILE – STORM DRAIN

SHEET NUMBER
09
OF 21 SHEETS
DRAWING NAME
PP01

10/31/2023 8:16:32 AM



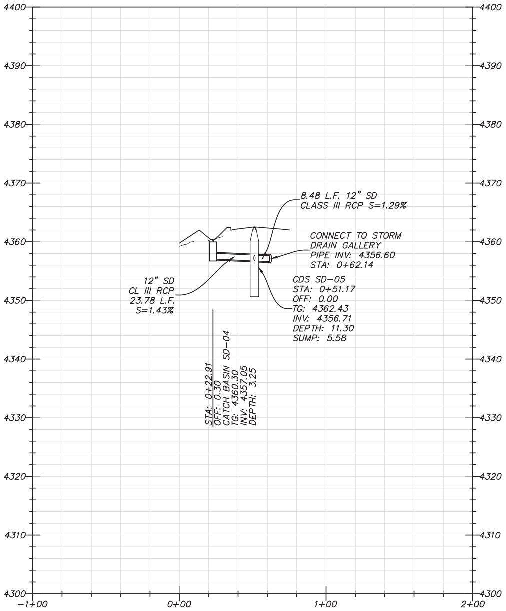




KEY MAP

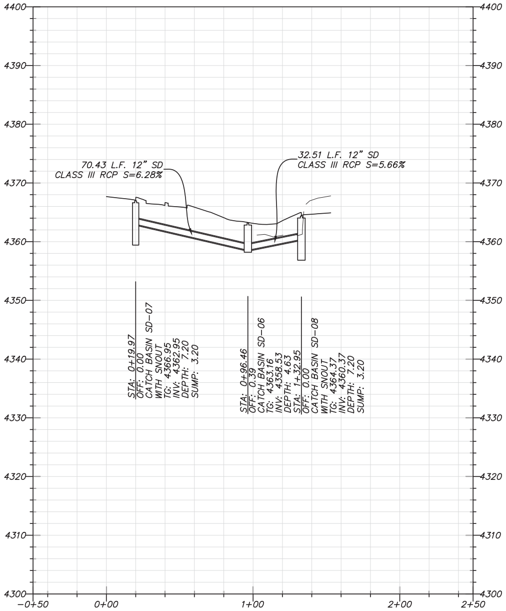
STORM DRAIN SD–03

STA: -1+00 TO 2+00



STORM DRAIN SD–04

STA: -0+50 TO 2+50



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RIVERDALE CITY

CITY ENGINEER	DATE

MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: RN
DATE: OCTOBER 2023
REV:
DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\10 PP02
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:16:38 AM

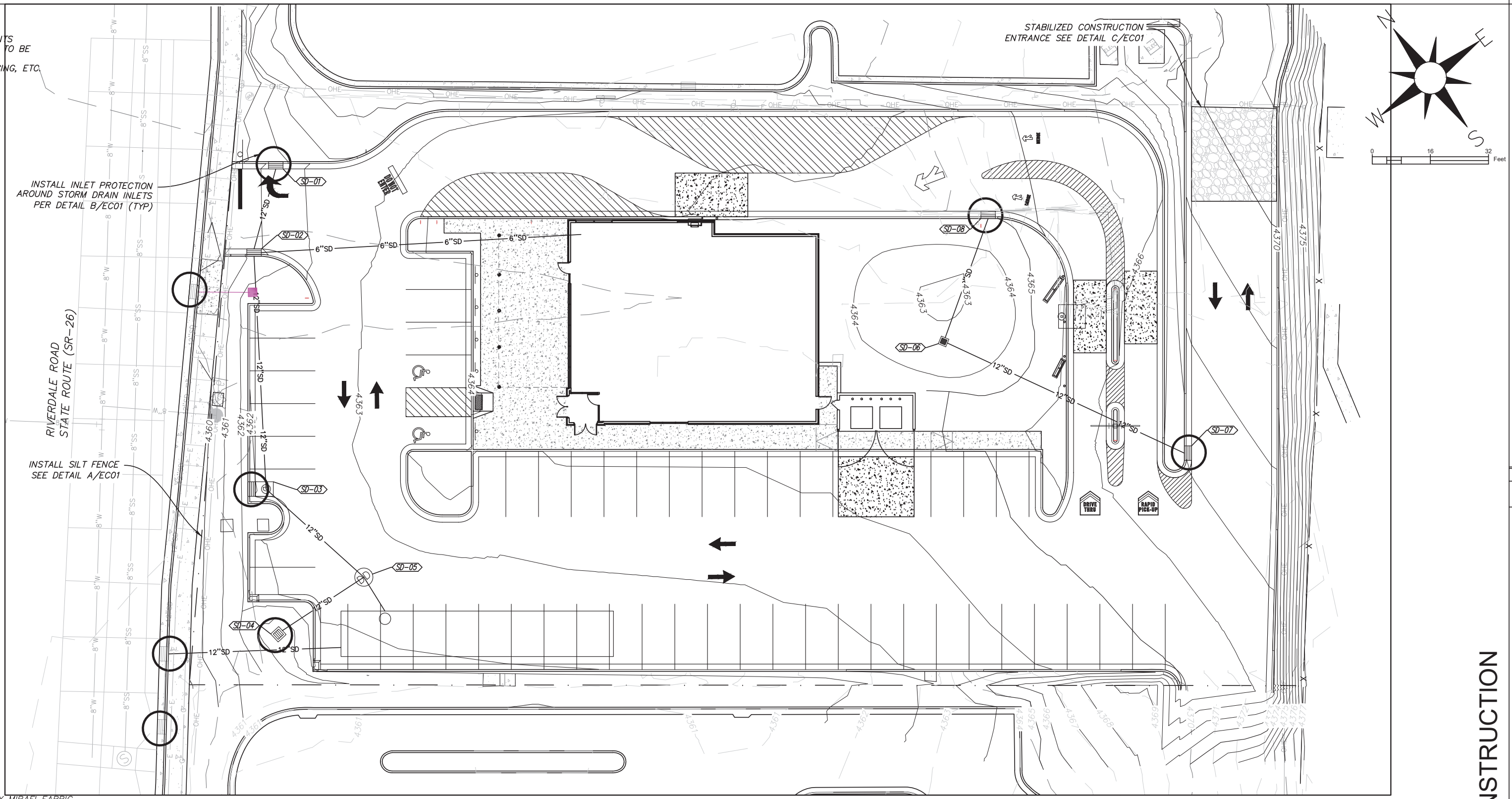
RIVERDALE CITY
PANERA BREAD
PLAN & PROFILE – STORM DRAIN

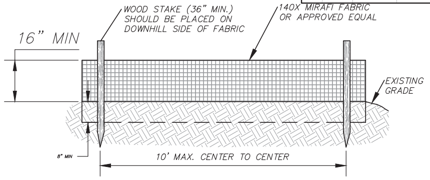
SHEET NUMBER
10
OF 21 SHEETS
DRAWING NAME
PP02

10/31/2023 8:16:38 AM

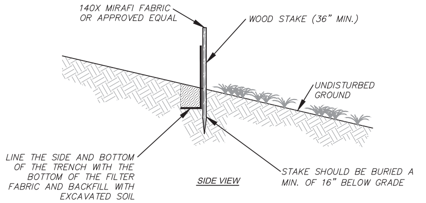
GENERAL NOTES:

1. ALL DETERIORATED, DAMAGED OR MISSING SURFACE IMPROVEMENTS SURROUNDING THE PERIMETER OF THE DEVELOPMENT WILL NEED TO BE REPLACED OR INSTALLED, I.E., CURB AND GUTTER, SIDEWALK, LANDSCAPING PARK STRIP IMPROVEMENTS, STREET LIGHTS, FENCING, ETC.
2. ALL CONSTRUCTION AND MATERIAL SHALL MEET RIVERDALE CITY STANDARDS


INSTALL INLET PROTECTION AROUND STORM DRAIN INLETS PER DETAIL B/EC01 (TYP)
INSTALL SILT FENCE SEE DETAIL A/EC01
STABILIZED CONSTRUCTION ENTRANCE SEE DETAIL C/EC01
RIVERDALE ROAD STATE ROUTE (SR-26)
SD-01
SD-02
SD-03
SD-04
SD-05
SD-06
SD-07
SD-08
12"SD
6"SD
8"W
8"SS
OHE
4360
4361
4362
4363
4364
4365
4366
4370
4375
DO NOT ENTER
DRIVE THRU
RAPID PICK-UP
N
E
S
W
0
16
32
Feet


16" MIN
WOOD STAKE (36" MIN.) SHOULD BE PLACED ON DOWNHILL SIDE OF FABRIC
140X MIRAFI FABRIC OR APPROVED EQUAL
EXISTING GRADE
8" MIN
10' MAX. CENTER TO CENTER

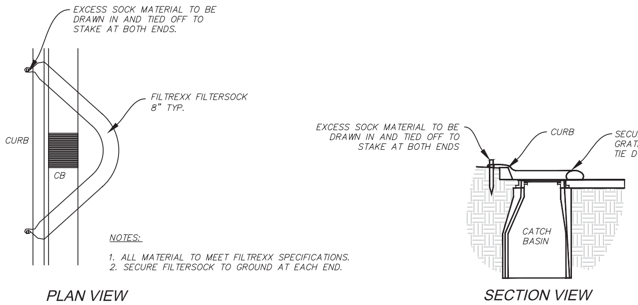
FRONT VIEW


140X MIRAFI FABRIC OR APPROVED EQUAL
WOOD STAKE (36" MIN.)
UNDISTURBED GROUND
LINE THE SIDE AND BOTTOM OF THE TRENCH WITH THE BOTTOM OF THE FILTER FABRIC AND BACKFILL WITH EXCAVATED SOIL
STAKE SHOULD BE BURIED A MIN. OF 16" BELOW GRADE

SIDE VIEW

A/EC01 TYPICAL SILT FENCE DETAIL

NOT TO SCALE


EXCESS SOCK MATERIAL TO BE DRAWN IN AND TIED OFF TO STAKE AT BOTH ENDS.
FILTREXX FILTERSOCK 8" TYP.
CURB
CB
EXCESS SOCK MATERIAL TO BE DRAWN IN AND TIED OFF TO STAKE AT BOTH ENDS
CURB
SECURE SOCK TO GRATE WITH RUBBER TIE DOWNS
CATCH BASIN

NOTES:

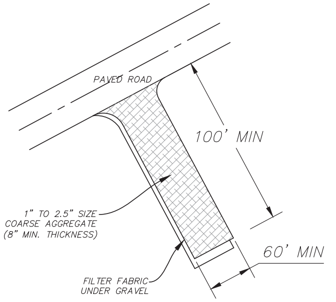
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. SECURE FILTERSOCK TO GROUND AT EACH END.

PLAN VIEW

SECTION VIEW

B/EC01 FILTREXX INLET PROTECTION -CURB INLET

NOT TO SCALE


PAVED ROAD
100' MIN
60' MIN
1" TO 2.5" SIZE COARSE AGGREGATE (8" MIN. THICKNESS)
FILTER FABRIC UNDER GRAVEL

C/EC01 STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

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RIVERDALE CITY

CITY ENGINEER DATE

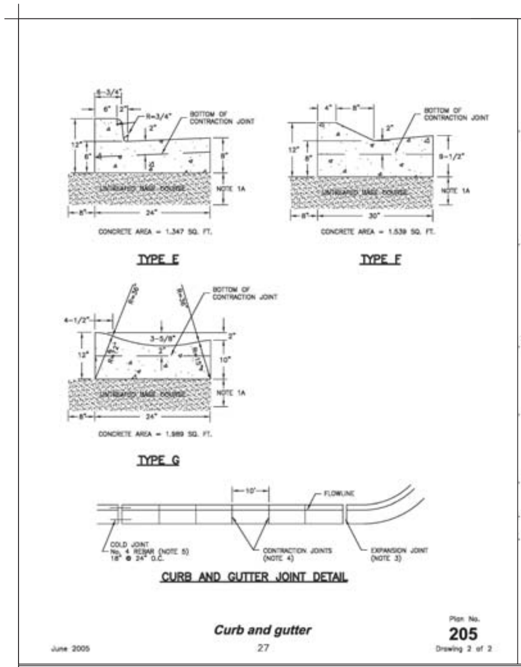
MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RN	DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	SOLICITATION NO:
SUBMITTED BY:	CONTRACT NO: 00909	
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\11 EC01		
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:16:49 AM

RIVERDALE CITY
PANERA BREAD
EROSION CONTROL

SHEET NUMBER
11
OF 21 SHEETS
DRAWING NAME
EC01

10/31/2023 8:16:49 AM



CONCRETE AREA = 1.347 SQ. FT.

CONCRETE AREA = 1.539 SQ. FT.

CONCRETE AREA = 1.989 SQ. FT.

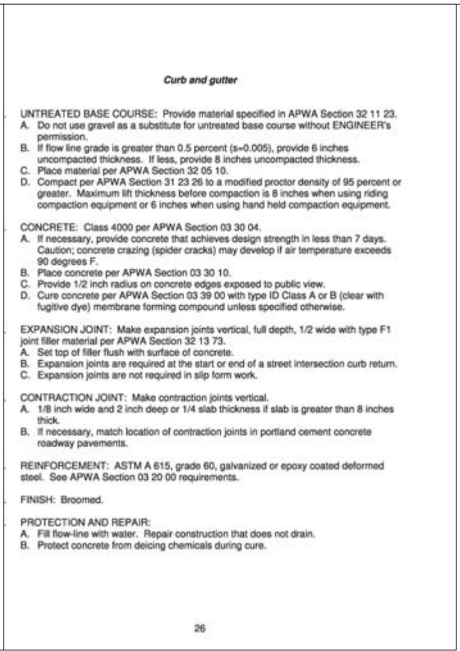
CURB AND GUTTER JOINT DETAIL

Curb and gutter

Plan No.
205
Drawing 2 of 2

June 2005

27



Curb and gutter

UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23.
- A. Do not use gravel as a substitute for untreated base course without ENGINEER's permission.
- B. If flow line grade is greater than 0.5 percent (s=0.005), provide 6 inches uncompacted thickness. If less, provide 8 inches uncompacted thickness.
- C. Place material per APWA Section 32 05 10.
- D. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment.

CONCRETE: Class 4000 per APWA Section 03 30 04.
- A. If necessary, provide concrete that achieves design strength in less than 7 days. Caution; concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
- B. Place concrete per APWA Section 03 30 10.
- C. Provide 1/2 inch radius on concrete edges exposed to public view.
- D. Cure concrete per APWA Section 03 39 00 with type ID Class A or B (clear with fugitive dye) membrane forming compound unless specified otherwise.

EXPANSION JOINT: Make expansion joints vertical, full depth, 1/2 wide with type F1 joint filler material per APWA Section 32 13 73.
- A. Set top of filler flush with surface of concrete.
- B. Expansion joints are required at the start or end of a street intersection curb return.
- C. Expansion joints are not required in slip form work.

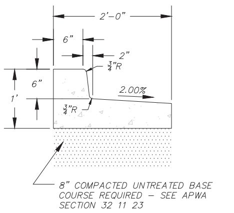
CONTRACTION JOINT: Make contraction joints vertical.
- A. 1/8 inch wide and 2 inch deep or 1/4 slab thickness if slab is greater than 8 inches thick.
- B. If necessary, match location of contraction joints in portland cement concrete roadway pavements.

REINFORCEMENT: ASTM A 615, grade 60, galvanized or epoxy coated deformed steel. See APWA Section 03 20 00 requirements.

FINISH: Broomed.

PROTECTION AND REPAIR:
- A. Fill flow-line with water. Repair construction that does not drain.
- B. Protect concrete from deicing chemicals during cure.

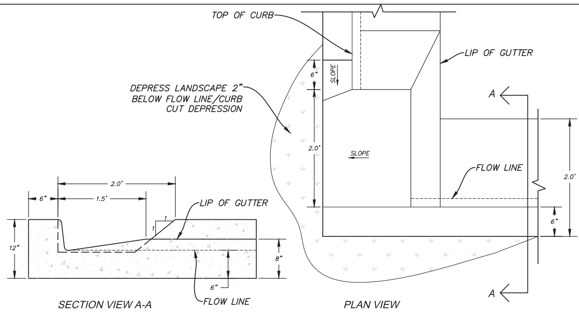
26



2'-0"
6"
2"
3/4"R
6"
1'
2.00%
3/4"R
8" COMPACTED UNTREATED BASE COURSE REQUIRED – SEE APWA SECTION 32 11 23

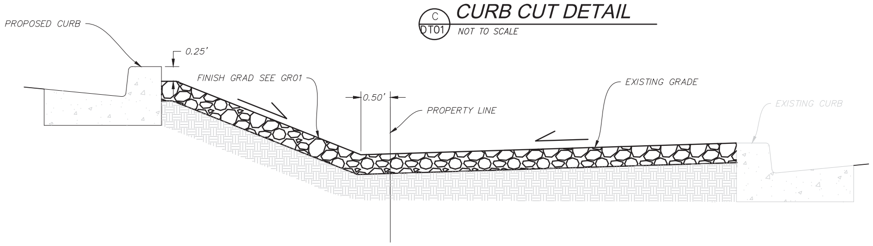
TYPE E CURB & GUTTER MODIFIED

A
DT01
N.T.S.



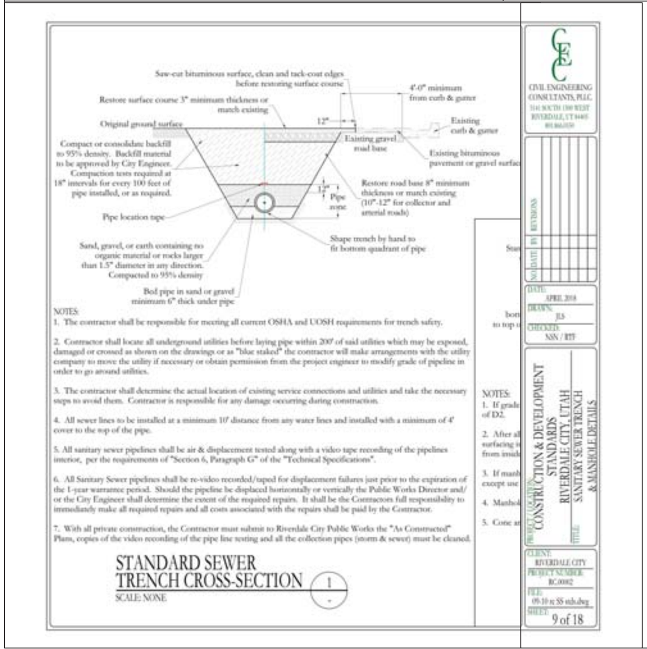
CURB CUT DETAIL

C
DT01
NOT TO SCALE



SWALE SECTION DETAIL

B
DT01
N.T.S.



Saw-cut bituminous surface, clean and tack-coat edges before restoring surface course
Restore surface course 3" minimum thickness or match existing
4'-0" minimum from curb & gutter
Original ground surface
12"
Existing curb & gutter
Existing gravel road base
Existing bituminous pavement or gravel surface
Compact or consolidate backfill to 95% density. Backfill material to be approved by City Engineer. Compaction tests required at 18" intervals for every 100 feet of pipe installed, or as required.
12"
Pipe zone
Restore road base 8" minimum thickness or match existing (10"-12" for collector and arterial roads)
Pipe location tape
Shape trench by hand to fit bottom quadrant of pipe
Sand, gravel, or earth containing no organic material or rocks larger than 1.5" diameter in any direction. Compacted to 95% density
Bed pipe in sand or gravel minimum 6" thick under pipe
CIVIL ENGINEERING CONSULTANTS, PLLC.
NO. DATE BY REVISIONS
DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF
PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: SANITARY SEWER TRENCH & MANHOLE DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 09-10 rc SS stds.dwg
SHEET: 9 of 18

NOTES:
1. The contractor shall be responsible for meeting all current OSHA and UOSH requirements for trench safety.

2. Contractor shall locate all underground utilities before laying pipe within 200' of said utilities which may be exposed, damaged or crossed as shown on the drawings or as "blue staked" the contractor will make arrangements with the utility company to move the utility if necessary or obtain permission from the project engineer to modify grade of pipeline in order to go around utilities.

3. The contractor shall determine the actual location of existing service connections and utilities and take the necessary steps to avoid them. Contractor is responsible for any damage occurring during construction.

4. All sewer lines to be installed at a minimum 10' distance from any water lines and installed with a minimum of 4' cover to the top of the pipe.

5. All sanitary sewer pipelines shall be air & displacement tested along with a video tape recording of the pipelines interior, per the requirements of "Section 6, Paragraph G" of the "Technical Specifications".

6. All Sanitary Sewer pipelines shall be re-video recorded/taped for displacement failures just prior to the expiration of the 1-year warrantee period. Should the pipeline be displaced horizontally or vertically the Public Works Director and/or the City Engineer shall determine the extent of the required repairs. It shall be the Contractors full responsibility to immediately make all required repairs and all costs associated with the repairs shall be paid by the Contractor.

7. With all private construction, the Contractor must submit to Riverdale City Public Works the "As Constructed" Plans, copies of the video recording of the pipe line testing and all the collection pipes (storm & sewer) must be cleaned.

Stan

bott
to top

NOTES:
1. If grade
of D2.

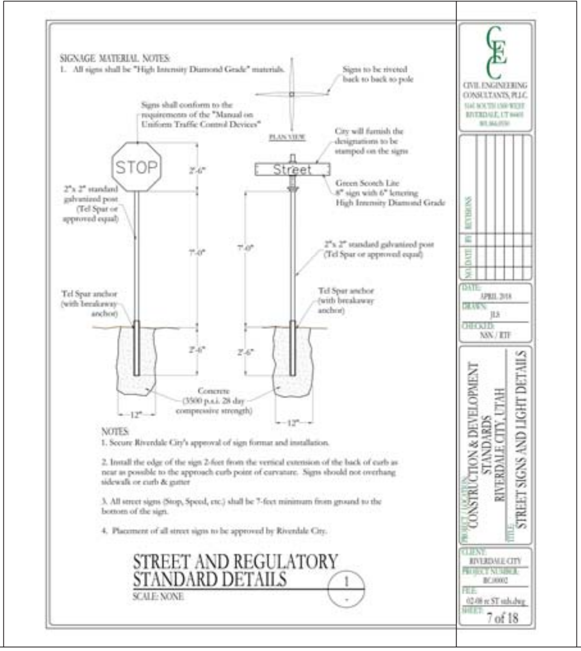
2. After all
surfacing i
from inside

3. If manh
except use

4. Manhol

5. Cone ar

STANDARD SEWER
TRENCH CROSS-SECTION
SCALE: NONE
1
-



Signs to be riveted back to back to pole
PLAN VIEW
Signs shall conform to the requirements of the "Manual on Uniform Traffic Control Devices"
City will furnish the designations to be stamped on the signs
STOP
Street
2'-6"
Green Scotch Lite 8" sign with 6" lettering High Intensity Diamond Grade
2"x 2" standard galvanized post (Tel Spar or approved equal)
7'-0"
7'-0"
2"x 2" standard galvanized post (Tel Spar or approved equal)
Tel Spar anchor (with breakaway anchor)
Tel Spar anchor (with breakaway anchor)
2'-6"
2'-6"
Concrete (3500 p.s.i. 28 day compressive strength)
12"
12"
CIVIL ENGINEERING CONSULTANTS, PLLC.
NO. DATE BY REVISIONS
DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF
PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: STREET SIGNS AND LIGHT DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 02-08 rc ST stds.dwg
SHEET: 7 of 18

SIGNAGE MATERIAL NOTES:
1. All signs shall be "High Intensity Diamond Grade" materials.

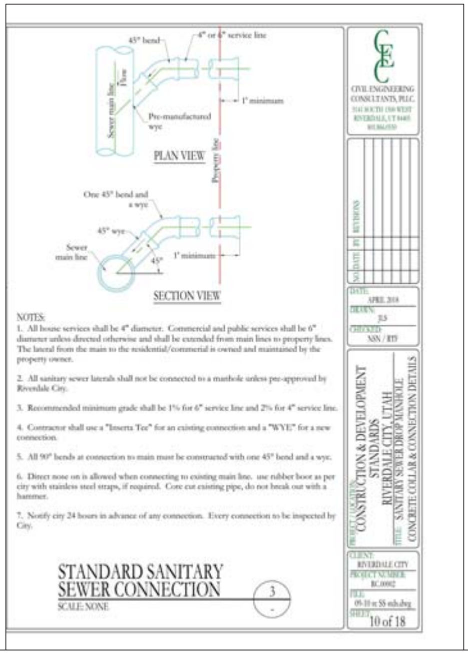
NOTES:
1. Secure Riverdale City's approval of sign format and installation.

2. Install the edge of the sign 2-feet from the vertical extension of the back of curb as near as possible to the approach curb point of curvature. Signs should not overhang sidewalk or curb & gutter

3. All street signs (Stop, Speed, etc.) shall be 7-feet minimum from ground to the bottom of the sign.

4. Placement of all street signs to be approved by Riverdale City.

STREET AND REGULATORY
STANDARD DETAILS
SCALE: NONE
1
-



NOTES:
1. All house services shall be 4" diameter. Commercial and public services shall be 6" diameter unless directed otherwise and shall be extended from main lines to property lines. The lateral from the main to the residential/commercial is owned and maintained by the property owner.

2. All sanitary sewer laterals shall not be connected to a manhole unless pre-approved by Riverdale City.

3. Recommended minimum grade shall be 1% for 6" service line and 2% for 4" service line.

4. Contractor shall use a "Inserta Tee" for an existing connection and a "WYE" for a new connection.

5. All 90° bends at connection to main must be constructed with one 45° bend and a wye.

6. Direct nose on is allowed when connecting to existing main line. use rubber boot as per city with stainless steel straps, if required. Core cut existing pipe, do not break out with a hammer.

7. Notify city 24 hours in advance of any connection. Every connection to be inspected by City.

STANDARD SANITARY
SEWER CONNECTION
SCALE: NONE
3
-

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WEST JORDAN, UT 84088
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RIVERDALE CITY

CITY ENGINEER	DATE

MARK	DESCRIPTION	DATE	APPR.

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGNED BY: RN		DATE: OCTOBER 2023	REV:
DWN BY: CTL	CKD BY: JTA	SOLICITATION NO:	
SUBMITTED BY:		CONTRACT NO: 00909	
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\12 DT01			
SIZE: ANSI D	PLOTTED BY:	PLOT DATE: 10/31/2023 8:16:55 AM	

RIVERDALE CITY
PANERA BREAD
DETAILS

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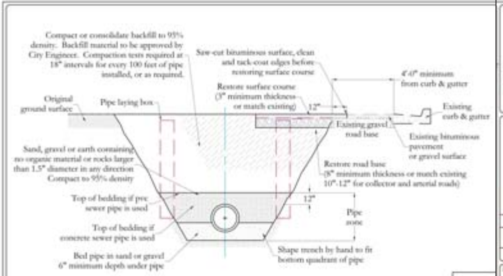
BLUE STAKES 1 800 662 4111

SHEET NUMBER
12
OF 21 SHEETS
DRAWING NAME
DT01

10/31/2023 8:16:55 AM


Compact or consolidate backfill to 95% density. Backfill material to be approved by City Engineer. Compaction tests required at 18" intervals for every 100 feet of pipe installed, or as required.
Saw-cut bituminous surface, clean and tack-coat edges before restoring surface course
4'-0" minimum from curb & gutter
Original ground surface
Pipe laying box
Restore surface course (3" minimum thickness or match existing)
12"
Existing curb & gutter
Existing gravel road base
Existing bituminous pavement or gravel surface
Sand, gravel or earth containing no organic material or rocks larger than 1.5" diameter in any direction Compact to 95% density
Restore road base (8" minimum thickness or match existing 10"-12" for collector and arterial roads)
Top of bedding if pvc sewer pipe is used
Top of bedding if concrete sewer pipe is used
Pipe zone
Bed pipe in sand or gravel 6" minimum depth under pipe
Shape trench by hand to fit bottom quadrant of pipe

NOTES:

1. The contractor shall be responsible for meeting all current OSHA and UOSH requirements for trench safety.

2. Contractor shall locate all underground utilities before laying pipe within 200' of said utilities which may be exposed, damaged or crossed as shown on the drawings or as "blue staked" the contractor will make arrangements with the utility company to move the utility if necessary or obtain permission from the project engineer to modify grade of pipeline in order to go around utilities.

3. All storm water pipes to be installed in roadway or under curb and gutter with approval by the City Engineer.

4. Minimum pipe size for storm water pipe is 15" diameter and must be concrete.

5. Minimum depth of storm water pipe shall be 24" cover over top of pipe bell for standard backfill material, or as approved by City Engineer.

6. For all new construction, a storm water/oil/grit/debris separator is required. Sizing of the separation unit to be determined by the Design Engineer and stamped Engineering Calculations must be submitted for review.

7. Upon completion of the project storm drainage system the installed pipe, manholes, junction boxes, inlet boxes and all storm water facilities must be cleaned in the presence of the Public Works Storm Water Manager. The Storm Water Manager shall have the right to require a video of the completed work should he deem it is in the best interest of Riverdale City.

8. All Storm Water pipelines shall be air & displacement tested along with a video recording of the pipelines interior, per the requirements of "Section 6, Paragraph G" of the "Technical Specifications".

9. All Storm Water pipelines shall be re-video recorded/taped for displacement failures just prior to the expiration of the 1-year warrantee period. Should the pipeline be displaced horizontally or vertically the Public Works Director and/or the City Engineer shall determine the extent of the required repairs. It shall be the Contractors full responsibility to immediately make all required repairs and all costs associated with the repairs shall be paid by the Contractor.

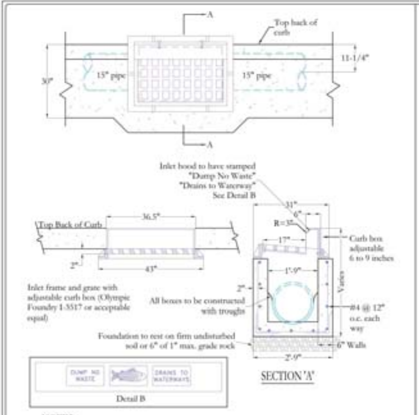
STORM WATER TRENCH CROSS-SECTION

1 / -

SCALE: NONE

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF
PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: STORM WATER TRENCH & MANHOLE DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 11-15 rc SW stds.dwg
SHEET: 11 of 18


A
Top back of curb
11-1/4"
30"
15" pipe
15" pipe
Inlet hood to have stamped "Dump No Waste" "Drains to Waterway" See Detail B
Top Back of Curb
36.5"
43"
2"
31"
6"
R=3"
17"
Curb box adjustable 6 to 9 inches
1'-9"
2"
Varies
Inlet frame and grate with adjustable curb box (Olympic Foundry I-3517 or acceptable equal)
All boxes to be constructed with troughs
#4 @ 12" o.c. each way
Foundation to rest on firm undisturbed soil or 6" of 1" max. grade rock
6" Walls
2'-9"
DUMP NO WASTE
DRAINS TO WATERWAYS
Detail B
SECTION 'A'

NOTES:

1. All storm water catch basins installed shall be cast-in-place. Any pre-cast boxes must be approved by Riverdale City prior to construction.

2. All reinforcement shall be #4 deformed steel, grade 60.

3. All reinforcement shall be placed at 9" o.c. each way in the floor and the walls.

4. The adjustable curb box inlet grate shall be bicycle safe. D&L Supply I-3517 or acceptable equal.

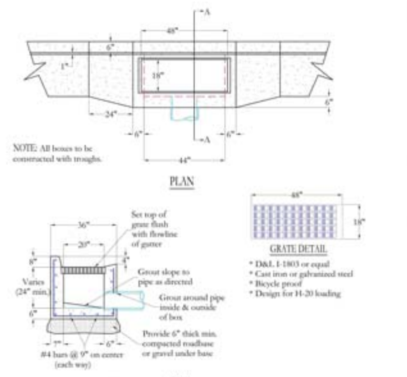
5. All pipes in the box shall be cut with the interior of the box and grouted smooth.

6. Rebar shall have 2" clear on earth side of structure.

HOODED CATCH BASIN

1 / -

SCALE: NONE


A
48"
6"
1"
18"
6"
24"
6"
6"
44"
PLAN
36"
20"
8"
4"
Varies (24" min.)
6"
7"
6"
Set top of grate flush with flowline of gutter
Grout slope to pipe as directed
Grout around pipe inside & outside of box
Provide 6" thick min. compacted roadbase or gravel under base
#4 bars @ 9" on center (each way)
SECTION 'A'
48"
18"
GRATE DETAIL

NOTE: All boxes to be constructed with troughs.

- D&L I-1803 or equal
- Cast iron or galvanized steel
- Bicycle proof
- Design for H-20 loading

NOTE:
1. All storm water catch basins installed shall be cast-in-place. Any pre-cast boxes must be approved by Riverdale City prior to construction.

STANDARD CATCH BASIN

2 / -

SCALE: NONE

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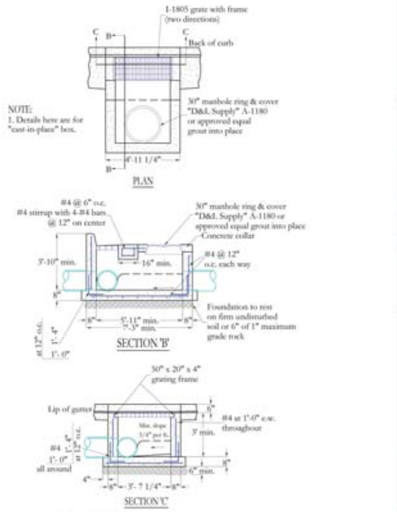
RIVERDALE, UT 84405
801.866.0550

DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF
PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: STORM WATER STANDARD & HOODED CATCH BASIN DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 11-15 rc SW stds.dwg
SHEET: 12 of 18

NOTE:
1. Details here are for "cast-in-place" box.


I-1805 grate with frame (two directions)
C
B
C
Back of curb
30" manhole ring & cover "D&L Supply" A-1180 or approved equal grout into place
4'-11 1/4"
B
PLAN
#4 @ 6" o.c.
#4 stirrup with 4-#4 bars @ 12" on center
30" manhole ring & cover "D&L Supply" A-1180 or approved equal grout into place
Concrete collar
#4 @ 12" o.c. each way
3'-10" min.
16" min.
8"
Foundation to rest on firm undisturbed soil or 6" of 1" maximum grade rock
5'-11" min.
7'-3" min.
@ 12" o.c.
1'-4"
1'-0"
SECTION 'B'
30" x 20" x 4" grating frame
Lip of gutter
Min. slope 1/4" per ft.
#4 at 1'-0" e.w. throughout
3' min.
#4
1'-0" all around
6" min.
3'-7 1/4"
SECTION 'C'

STANDARD COMBINATION BOX

2 / -

SCALE: NONE

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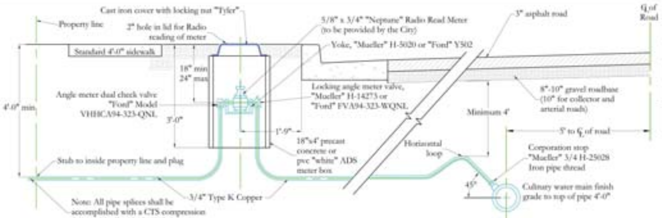
DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF
PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: STORM WATER DIVERSION & COMBINATION BOX DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 11-15 rc SW stds.dwg
SHEET: 14 of 18

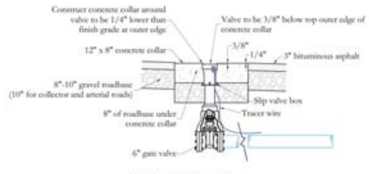

Cast iron cover with locking nut "Tyler"
Property line
2" hole in lid for Radio reading of meter
5/8" x 3/4" "Neptune" Radio Read Meter (to be provided by the City)
3" asphalt road
℄ of Road
Standard 4'-0" sidewalk
Yoke, "Mueller" H-5020 or "Ford" Y502
18" min 24" max
Angle meter dual check valve "Ford" Model VHHCA94-323-QNL
Locking angle meter valve, "Mueller" H-14273 or "Ford" FVA94-323-WQNL
8"-10" gravel roadbase (10" for collector and arterial roads)
4'-0" min.
3'-0"
Minimum 4'
1'-9"
5' to ℄ of road
18"x4' precast concrete or pvc "white" ADS meter box
Horizontal loop
Corporation stop "Mueller" 3/4 H-25028 Iron pipe thread
Stub to inside property line and plug
45°
Culinary water main finish grade to top of pipe 4'-0"
3/4" Type K Copper
Note: All pipe splices shall be accomplished with a CTS compression fitting - Mueller H-15403 fitting

Meter Size	Meter Box Size
3/4"	18"
1"	24" box
1-1/2"	30"
2"	36" box with 30" lid and grade ring

TYPICAL WATER CONNECTION

1 / -

SCALE: NONE


Construct concrete collar around valve to be 1/4" lower than finish grade at outer edge
Valve to be 3/8" below top outer edge of concrete collar
12" x 8" concrete collar
3/8"
1/4"
3" bituminous asphalt
8"-10" gravel roadbase (10" for collector and arterial roads)
Slip valve box
8" of roadbase under concrete collar
Tracer wire
6" gate valve

GATE VALVE CONCRETE COLLAR

2 / -

SCALE: NONE

NOTES:

1. Backfill: Install backfill in lifts not exceeding 8" after compaction. Compact each lift to an average dry density of 95% with no density test result less than 92%.

2. Residential water meters provided by City. Commercial and industrial water meters to be approved by City.

3. Pipe: Type K copper pipe.

4. Placement: All meters are to be centered in the park strip and must be placed near midpoint of the lot. Meters must not be located in a driveway, or in a sidewalk, and must be 24" away from driveway approaches.

5. Property owner is responsible for service line from property side of meter.

6. Taps to PVC C900 require brass double strap saddles. Direct taps not allowed to PVC. Direct taps to ductile iron are allowed.

7. Back flow prevention devices not required.

8. 1-1/2" and 2" meters require a meter setter Mueller H1423 with Mueller H15428 fittings or approved equal.

9. All meters over 1" is required to have a bypass.

10. Water meter size shall be the same size as the supply line into site.

11. Any standards and specifications not shown shall follow all APWA specifications.

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RIVERDALE, UT 84405
801.866.0550

DATE: APRIL 2018
DRAWN: JLS
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PROJECT / LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: CULINARY WATER CONNECTION & CONCRETE COLLAR DETAILS
CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 16-18 rc CW stds.dwg
SHEET: 17 of 18

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WWW.PERIGEECIVIL.COM

RIVERDALE CITY

CITY ENGINEER DATE

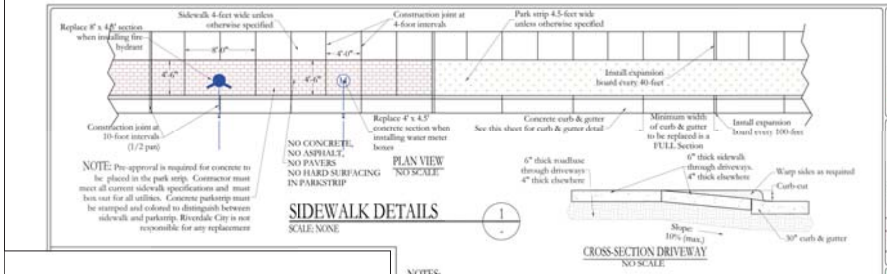
MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: RN
DWN BY: CTL
CKD BY: JTA
DATE: OCTOBER 2023
REV:
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\12 DT01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:17:01 AM

RIVERDALE CITY
PANERA BREAD
DETAILS

SHEET NUMBER
13
OF 21 SHEETS
DRAWING NAME
DT02

10/31/2023 8:17:01 AM


Replace 8' x 4.5' section when installing fire hydrant
Sidewalk 4-feet wide unless otherwise specified
Construction joint at 4-foot intervals
Park strip 4.5-feet wide unless otherwise specified
8'-0"
4'-0"
4'-6"
4'-6"
Install expansion board every 40-feet
Construction joint at 10-foot intervals (1/2 pan)
Replace 4' x 4.5' concrete section when installing water meter boxes
Concrete curb & gutter See this sheet for curb & gutter detail
Minimum width of curb & gutter to be replaced is a FULL Section
Install expansion board every 100-feet
NO CONCRETE, NO ASPHALT, NO PAVERS NO HARD SURFACING IN PARKSTRIP
PLAN VIEW
NO SCALE
6" thick roadbase through driveways 4" thick elsewhere
6" thick sidewalk through driveways. 4" thick elsewhere
Warp sides as required
Curb cut
Slope: 10% (max.)
30" curb & gutter

NOTE: Pre-approval is required for concrete to be placed in the park strip. Contractor must meet all current sidewalk specifications and must box out for all utilities. Concrete parkstrip must be stamped and colored to distinguish between sidewalk and parkstrip. Riverdale City is not responsible for any replacement

SIDEWALK DETAILS

SCALE: NONE

1

CROSS-SECTION DRIVEWAY

NO SCALE

NOTES:

1. A minimum 6-inch depth of roadbase or crushed gravel (1" minus) material shall be placed to grade & compacted to 95% of maximum dry density under driveway, waterway, and curb & gutter prior to placement of concrete.

2. A minimum 4-inch depth of roadbase material shall be placed to grade and compacted to 95% of maximum dry density under sidewalk prior to placement of concrete.

3. Where construction is adjacent to State Highway Frontage, State Highway Department requirements shall govern.

4. Concrete for sidewalks, curb & gutters, driveway approaches and waterways shall be 3/4-inch maximum aggregate class B concrete, 6 bags per yard, with a minimum compressive strength of 3,500 PSI at 28 days.

5. Expansion joints shall be constructed by placing an approved material, (typically bituminous impregnated fiberboard), the full depth of the concrete. Expansion material **shall be installed prior to the placement of the concrete** and set flush with the finish level of the sidewalk. **Concrete shall not be installed below the expansion joint.**

6. Construction joint is made by inserting 1/8-inch Steel plate into the concrete; finish with 1/2-inch radius edging tool or other method approve by Engineer.

7. Slope sidewalk to roadway at 2% grade.

8. Locate all inlet grates 2-feet minimum away from the pedestrian crosswalk, with all drainage intercepted before it gets to the pedestrian crosswalk area.

9. Minimum temperature for placement of concrete without protection is 40°F. (See Technical Specifications)

10. Below 40° F, all concrete to be protected for 10 days. (Portable heater may be required, as directed - See Technical Specifications)

11. All roadbase shall meet UDOT standards and specifications. Recycled concrete will NOT be permitted to use as a roadbase substitute.

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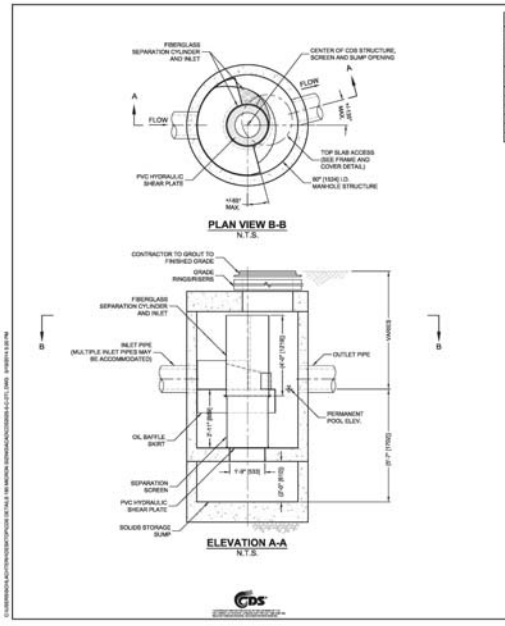
RIVERDALE, UT 84405
801.866.0550

NO. | DATE | BY | REVISIONS

DATE: APRIL 2018
DRAWN: JLS
CHECKED: NSN / RTF

PROJECT LOCATION: CONSTRUCTION & DEVELOPMENT STANDARDS RIVERDALE CITY, UTAH
TITLE: SIDEWALK AND WATERWAY DETAILS

CLIENT: RIVERDALE CITY
PROJECT NUMBER: RC.00002
FILE: 02-08 sc ST sidx.dwg
SHEET: 3 of 18


FIBERGLASS SEPARATION CYLINDER AND INLET
CENTER OF CDS STRUCTURE, SCREEN AND SUMP OPENING
FLOW
FLOW
A
A
TOP SLAB ACCESS (SEE FRAME AND COVER DETAIL)
PVC HYDRAULIC SHEAR PLATE
60" (1524) I.D. MANHOLE STRUCTURE
MAX.
PLAN VIEW B-B
N.T.S.
CONTRACTOR TO GROUT TO FINISHED GRADE
GRADE RINGS/RISERS
FIBERGLASS SEPARATION CYLINDER AND INLET
INLET PIPE (MULTIPLE INLET PIPES MAY BE ACCOMMODATED)
OUTLET PIPE
VARIES
B
B
PERMANENT POOL ELEV.
OIL BAFFLE SKIRT
SEPARATION SCREEN
PVC HYDRAULIC SHEAR PLATE
SOLIDS STORAGE SUMP
ELEVATION A-A
N.T.S.
CDS

CDS2025-5-C DESIGN NOTES

THE STANDARD CDS2025-5-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS2025-5-C
INLINE CDS
STANDARD DETAIL

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RIVERDALE CITY

CITY ENGINEER | DATE

MARK | DESCRIPTION | DATE | APPR.

DESIGNED BY: RN
DATE: OCTOBER 2023
REV:
DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\IP\12 DT01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:17:06 AM

RIVERDALE CITY
PANERA BREAD
DETAILS

SHEET NUMBER
14
OF 21 SHEETS
DRAWING NAME
DT03

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10/31/2023 8:17:06 AM

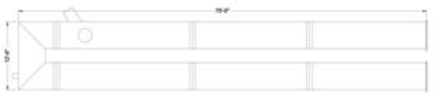
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 153 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 4,000 CF
- PIPE STORAGE VOLUME = 2,994 CF
- BACKFILL STORAGE VOLUME = 1,036 CF
- TOTAL STORAGE PROVIDED = 4,030 CF

PIPE DETAILS
- DIAMETER = 60"
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 30"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 0"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 0"



ASSEMBLY
SCALE: 1" = 10'

NOTES
- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

DATE	REVISION DESCRIPTION	BY

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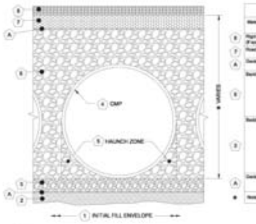
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO38194 Panera Riverdale
CMP Gallery
Ogden, UT
DETENTION SYSTEM

SHEET NO. 1



	Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable)			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6	Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145 A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction*
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For truck pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A	Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of infiltration systems due to the propensity for geotextiles to clog over time.
*	Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

① MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

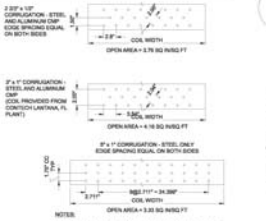
② PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

⑤ HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

BACKFILL
MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.


2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES
2.8"
COIL WIDTH
3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)
3.86"
COIL WIDTH
5" x 1" CORRUGATION - STEEL ONLY EDGE SPACING EQUAL ON BOTH SIDES
1.75" CC TYP
2.711"
9@2.711" = 24.399"
COIL WIDTH

OPEN AREA = 3.76 SQ IN/SQ FT

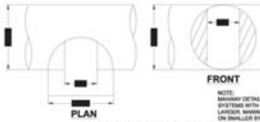
OPEN AREA = 4.16 SQ IN/SQ FT

OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

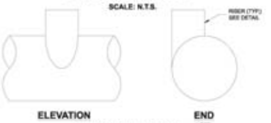
SCALE: N.T.S.



TYPICAL MANWAY DETAIL

SCALE: N.T.S.

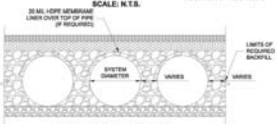
NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.



TYPICAL RISER DETAIL

SCALE: N.T.S.

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.


30 MIL HDPE MEMBRANE LINER OVER TOP OF PIPE (IF REQUIRED)
LIMITS OF REQUIRED BACKFILL
SYSTEM DIAMETER
VARIES
VARIES

TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

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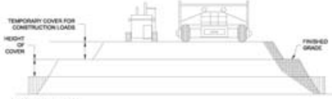


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.0	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

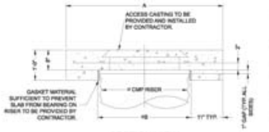
GALVANIZED: AASHTO M-36 OR ASTM A-760

APPOLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745
APPLICABLE
HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL APPRECIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.
REQUIREMENTS
INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

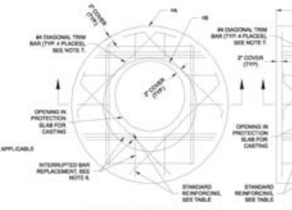
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.


A
ACCESS CASTING TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
1'-0"
8"
GASKET MATERIAL SUFFICIENT TO PREVENT SLAB FROM BEARING ON RISER TO BE PROVIDED BY CONTRACTOR.
Ø CMP RISER
ØB
11" TYP.
1" GAP (TYP ALL SIDES)

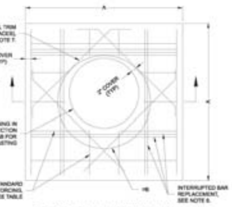
SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	Ø 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	Ø 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 9" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY


3" COVER (TYP)
ØA
ØB
#4 DIAGONAL TRIM BAR (TYP 4 PLACES), SEE NOTE 7.
3" COVER (TYP)
OPENING IN PROTECTION SLAB FOR CASTING
INTERRUPTED BAR REPLACEMENT, SEE NOTE 6.
STANDARD REINFORCING, SEE TABLE

ROUND OPTION PLAN VIEW


A
#4 DIAGONAL TRIM BAR (TYP 4 PLACES), SEE NOTE 7.
2" COVER (TYP)
2" COVER (TYP)
OPENING IN PROTECTION SLAB FOR CASTING
STANDARD REINFORCING, SEE TABLE
ØB
INTERRUPTED BAR REPLACEMENT, SEE NOTE 6.
A

SQUARE OPTION PLAN VIEW

NOTES:
1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

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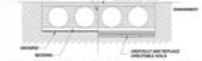
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

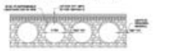

GEOGRID USED TO REDUCE THE AMOUNT OF UNDERCUT
BACKFILL
COVER
GEOGRID IN WHEN USED
EMBANKMENT
GEOGRID
BEDDING
UNDERCUT AND REPLACE UNSUITABLE SOILS

GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

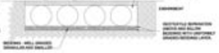
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

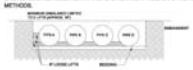
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.


LIVE LOAD
BACKFILL - WELL GRADED GRANULAR AND SMALLER
EMBANKMENT
BEDDING - WELL GRADED GRANULAR AND SMALLER

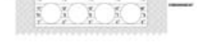
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

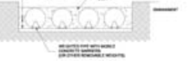


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

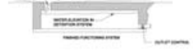

STAGE POURS AS REQUIRED TO CONTROL FLOATATION AND PIPE DISTORTION/DISPLACEMENT
CLSM
EMBANKMENT
WEIGHTED PIPE WITH MOBILE CONCRETE BARRIERS (OR OTHER REMOVABLE WEIGHTS)

CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.


CATCH BASIN INLET
WATER
WATER
WATER ELEVATION IN DETENTION SYSTEM
FINISHED FUNCTIONING SYSTEM
OUTLET CONTROL

CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM.

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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RIVERDALE CITY

CITY ENGINEER DATE

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DESIGNED BY: RN
DATE: OCTOBER 2023
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DWN BY: CTL
CKD BY: JTA
SOLICITATION NO:
SUBMITTED BY:
CONTRACT NO: 00909
FILE NAME: N:\00909 Panera Riverdale\Cadd\P\12 DT01
SIZE: ANSI D
PLOTTED BY:
PLOT DATE: 10/31/2023 8:17:11 AM

RIVERDALE CITY
PANERA BREAD
DETAIL SHEET

SHEET NUMBER
15
OF 21 SHEETS

DRAWING NAME
DT04

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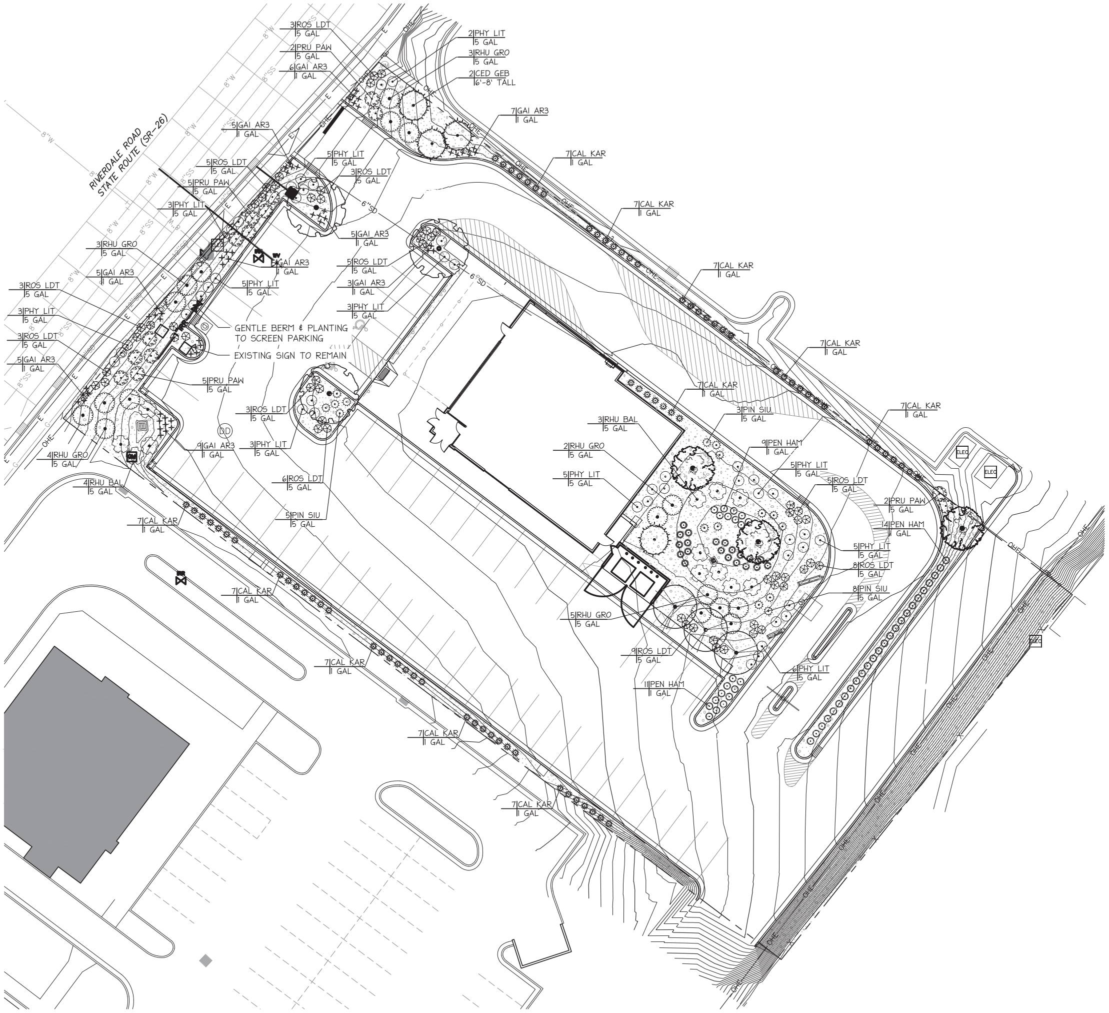


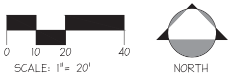
PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	CAL		QTY
❁	ACE GRA	ACER GRANDIDENTATUM BIGTOOTH MAPLE	2" CAL		3
⊗	SYR IVO	SYRINGA RETICULATA 'IVORY SILK' IVORY SILK JAPANESE TREE LILAC	2" CAL		3
⊙	ZEL MUS	ZELKOVA SERRATA 'MUSASHINO' MUSASHINO JAPANESE ZELKOVA	2" CAL		3
EVERGREEN TREES	CODE	BOTANICAL / COMMON NAME	CAL		QTY
⊙	CED GEB	CEDRUS LIBANI 'GREEN CASCADE' WEEPING LEBANON CEDAR	6'-8' TALL		4
SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE		QTY
⊙	PHY LIT	PHYSOCARPUS OPULIFOLIUS 'LITTLE DEVIL' LITTLE DEVIL™ DWARF NINEBARK	5 GAL		45
⊙	PIN SIU	PINUS MUGO 'CARSTEN'S WINTERGOLD' CARSTEN'S WINTERGOLD MUGO PINE	5 GAL		16
⊙	PRU PAW	PRUNUS BESSEYI 'P011S' PAWNEE BUTTES® SAND CHERRY	5 GAL		14
⊙	RHU GRO	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	5 GAL		17
⊙	RHU BAL	RHUS TYPHINA 'BAILTIGER' TIGER EYES® STAGHORN SUMAC	5 GAL		12
⊗	ROS LDT	ROSA X 'MEIZORLAND'® PP28054 WHITE DRIFT ROSE	5 GAL		53
PERENNIALS/GRASSES	CODE	BOTANICAL / COMMON NAME	SIZE		QTY
✹	CAL KAR	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS	1 GAL		77
✦	GAI AR3	GAILLARDIA ARISTATA 'ARIZONA SUN' ARIZONA SUN BLANKET FLOWER	1 GAL		55
⊙	PEN HAM	PENNISETUM ALOPECUROIDES 'HAMELN' HAMELN FOUNTAIN GRASS	1 GAL		45
MULCH	CODE	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
▨	SM2	TAN STONE MULCH MATCH ADJACENT PROPERTY (MATCH STONE MULCH USED AT STARBUCKS)	1"-2"		10,794 SF

SITE SUMMARY CALCULATIONS:

DESCRIPTION	AREA	PERCENT
OVERALL PROJECT AREA	48,536 SF	
LANDSCAPE (LS) AREA	9,512 SF	20 % (OF TOTAL SITE)
LS AREA IN TURF GRASS	0 SF	0 % (OF LS AREA)
LS AREA DROUGHT TOLERANT	9,512 SF	100 % (OF LS AREA)

TREE SUMMARY
TREES REQUIRED (1 FOR EVERY 5,000) = 10
TREES PROVIDED 13
HIGHEST % OF TREES OF SINGLE VARIETY= 28%



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G.BROWN:DESIGN INC
SITE AND LANDSCAPE ARCHITECTS
678 East Vine Street, Ste 10
Murray, Utah 84107
801.575.6066
www.gbrowndesign.com

■ PREPARED FOR:
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■ CONSULTANTS:

PANERA BREAD
4130 RIVERDALE ROAD
RIVERDALE, UTAH

■ REVISIONS:
- -
- -
- -
- -
- -

■ STAMP
MICHAEL WONENBERG
NO. 7456909-5301
Mike Wonenberg
8.29.2023

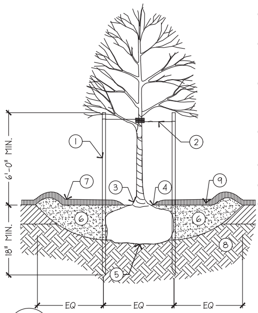
■ SHEET TITLE:
PLANTING PLAN

■ DATE: 10-26-2023
■ DRAWN BY: ECB
■ CHECKED BY: MJW
■ JOB NO.: U22-053

■ SHEET NO:
LP-101

NOTES:

1. INSTALL TREE PLUMB
2. FOR ALL FALL PLANTING, WRAP TRUNK TO LOWEST BRANCH. REMOVE THE FOLLOWING SPRING.



① 2" DIA. (ROUND) FIR POSTS; 2 PER TREE; ALL POSTS SHALL BE PLUMB AND HAVE SAME HEIGHT ABOVE FINISH GRADE

② TREE TIE - SEE SPECS FOR TYPE AND ATTACHMENT.

③ TOP OF ROOTBALL SHALL BE 1"-2" ABOVE FINISHED GRADE

④ ROOT FLARE SHALL BE EXPOSED; MULCH SHOULD NOT BE WITHIN 4" OF TREE TRUNK

⑤ PLACE ROOTBALL ON UNDISTURBED SUBSOIL. CUT AND REMOVE WIRE BASKET AND BURLAP/OTHER WRAPPING MATERIALS.

⑥ EXCAVATE HOLE TO DIAMETER 3X WIDER THAN ROOTBALL. BACKFILL WITH PLANTING SOIL MIX

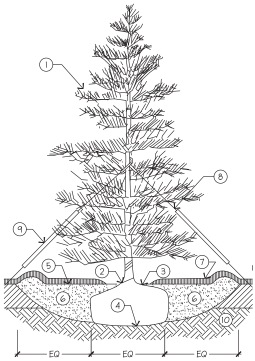
⑦ TYPE & MULCH, DEPTH AS SPECIFIED

⑧ UNDISTURBED SUBGRADE

⑨ 5' DIA. DEPRESSED WATERING BASIN

① DECIDUOUS TREE WITH STAKING

NTS



① INSTALL TREE PLUMB

② TOP OF ROOTBALL SHALL BE 1"-2" ABOVE FINISHED GRADE

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④ PLACE ROOTBALL ON UNDISTURBED SUBSOIL. CUT AND REMOVE WIRE BASKET AND BURLAP/OTHER WRAPPING MATERIALS.

⑤ MULCH TYPE & DEPTH AS SPECIFIED

⑥ EXCAVATE HOLE TO DIAMETER 3X WIDER THAN ROOTBALL. BACKFILL PLANTING SOIL MIX.

⑦ 5' DIA. DEPRESSED WATERING BASIN

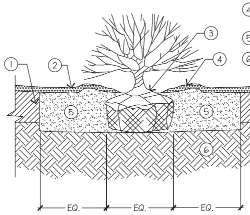
⑧ GUYING & STAKING SYSTEM - REFER TO TECHNICAL SPECIFICATIONS

⑨ SAFETY FLAGGING (PVC SLEEVE)

⑩ UNDISTURBED SUBGRADE

② EVERGREEN TREE WITH GUYING SYSTEM

NTS



① PLANTING SOIL MIX (SEE SPECS)

② MULCH TYPE & DEPTH AS SPECIFIED

③ SET ROOT FLARE 2" HIGHER THAN FINISH GRADE TO ALLOW FOR SETTLING

④ BERM TO FORM DEPRESSED WATERING BASIN

⑤ PLANTING SOIL MIX (SEE SPECS)

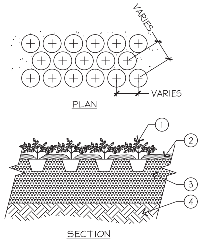
⑥ UNDISTURBED SUBGRADE

NOTES:

1. PLACE BALL ON UNDISTURBED SUBGRADE. REMOVE AND DISCARD WRAPPING MATERIAL EXCEPT UNDER BALL.
2. SETTLE PLANT BY FILLING PLANTING PIT WITH WATER USING HOSE OR BUCKET.
3. MULCH SHOULD NOT BE WITHIN 4" OF TRUNK.
4. REMOVE WATERING BASIN PRIOR TO END OF MAINTENANCE PERIOD.

③ SHRUB

NTS



① GROUNDCOVER/PERENNIALS (SEE NOTES)

② MULCH TYPE & DEPTH AS SPECIFIED

③ PLANTING SOIL MIX (SEE SPECS)

④ UNDISTURBED SUBGRADE

NOTES:

1. SEE PLANTING LEGEND FOR SPACING.

④ GROUNDCOVER / PERENNIAL

NTS

PLANTING NOTES

1. THE BASE INFORMATION FOR THIS DRAWING WAS OBTAINED FROM OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DRAWING WITH ACTUAL FIELD CONDITIONS PRIOR TO BEGINNING ANY WORK AND IMMEDIATELY NOTIFYING THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES. IN THE EVENT THAT THE CONTRACTOR BEGINS WORK PRIOR TO VERIFYING AND COMPARING THE BASE INFORMATION WITH ACTUAL FIELD CONDITIONS, THEN ANY CHANGES OR ALTERATIONS TO THE WORK INVOLVED WITH THESE DRAWINGS DUE TO SUCH DISCREPANCIES WILL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND MARKING THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF WORK PRIOR TO BEGINNING CONSTRUCTION. CONTACT THE OWNER, BLUE STAKES OF UTAH AT 811 OR 1-800-662-4111, AND ALL OTHER ENTITIES AS NECESSARY. IN THE EVENT THE CONTRACTOR BEGINS CONSTRUCTION WORK PRIOR TO VERIFYING AND STAKING ALL UTILITIES, AND DAMAGE TO UTILITIES OCCURS, THE DAMAGED UTILITIES WILL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
3. REFER TO LEGENDS, NOTES, AND DETAILS FOR FURTHER INFORMATION.
4. ANY ALTERATIONS TO THESE ACTUAL PLANTING PLANS DURING CONSTRUCTION SHALL BE RECORDED ON "AS BUILT" DRAWINGS AND PROVIDED TO THE OWNER.
5. ALL PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERY ASSOCIATION, INC.
6. ALL PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE NOTED ON THE PLANT LIST.
7. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL QUANTITIES AND SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING DESIGN SHOWN ON THE PLANS REGARDLESS OF QUANTITIES INDICATED IN THE PLANT SCHEDULE.
8. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE ONLY AS APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
9. ALL PLANT BEDS SHALL RECEIVE 12" OF PLANTING SOIL MIX AS SPECIFIED. BACKFILL ALL PLANTING PITS WITH PLANTING SOIL MIX.
10. PLANTING SOIL MIX TO BE AS FOLLOWS: 80% TOPSOIL, 10% UTELITE, AND 10% ORGANIC COMPOST.
11. PLANTER AREAS SHOWN IN GRAY ON THE PLANS TO RECEIVE FOUR INCHES (4)" DEPTH STONE MULCH. STONE MULCH TO MATCH ADJACENT PROPERTY (STARBUCKS). INSTALL ON TOP OF DEWITT PRO-5 WEED-BARRIER FABRIC.
12. APPLY TREFLAN (OR OWNER APPROVED EQUAL) PRE-EMERGENT HERBICIDE FOR USE IN PLANTER BEDS FOR WEED CONTROL. APPLY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. THE PRE-EMERGENT APPLICATION MUST BE FOLLOWED WITHIN 8 HOURS WITH OVERHEAD WATERING OR RAINFALL EQUIVALENT TO 1/2".

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■ STAMP

MICHAEL WONENBERG
NO. 7456909-5301
Mike Wonenberg
8.29.2023

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PLANTING
DETAILS

■ DATE: 10-26-2023
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■ JOB NO.: U22-053

■ SHEET NO:

LP-501

CITY REVIEW - NOT FOR CONSTRUCTION

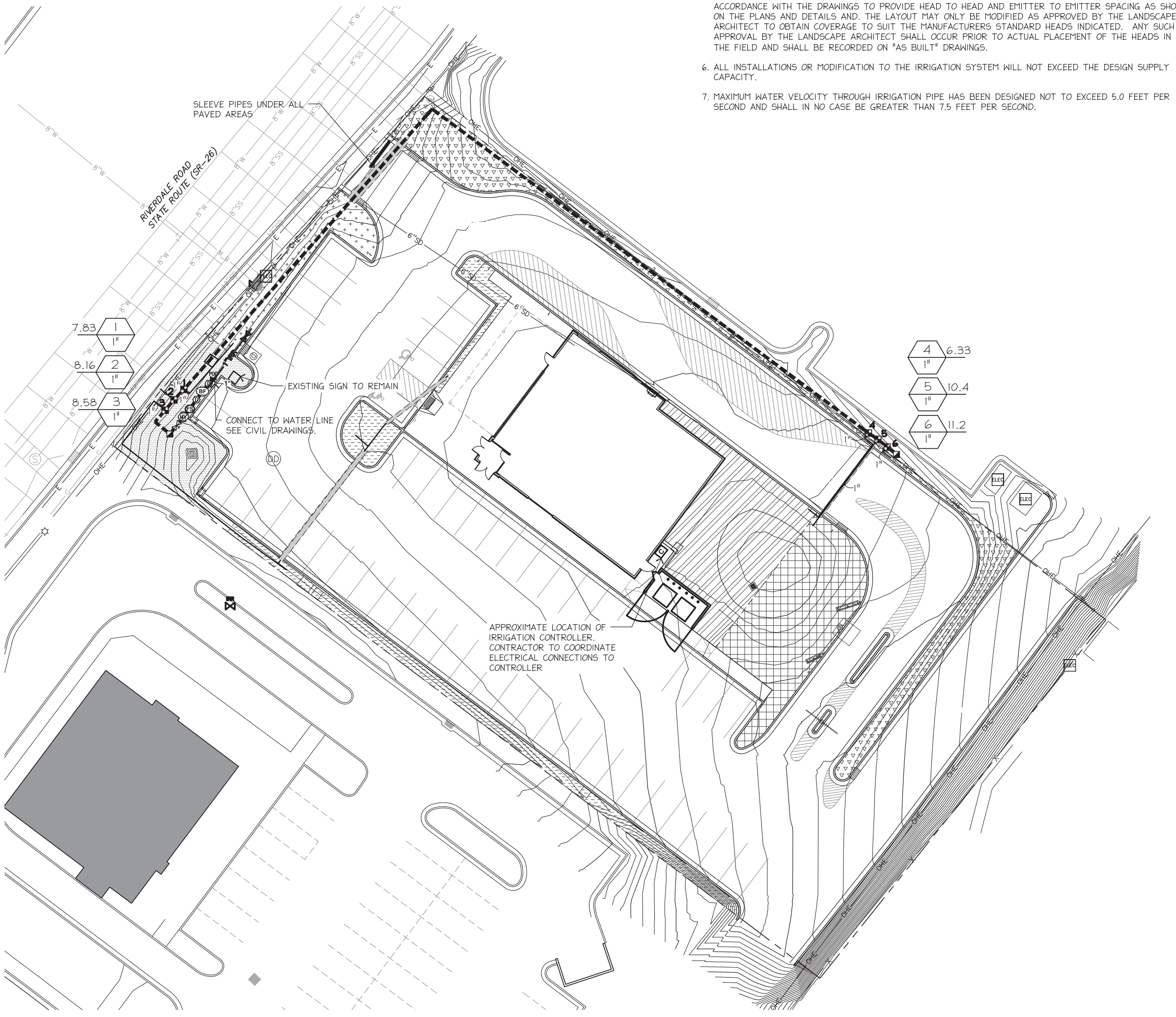
MAXIMUM WATER USAGE CALCULATIONS

GROSS IRRIGATION REQUIREMENT (GIR) = (ETo x PF x A) x 0.623
(GIR) = (7.93 x .25 x 8,232) x 0.623 = 10,282 Gallons per month
NET IRRIGATION REQUIREMENT (NIR) = GIR/IE
= 10,282/.9 = 11,424 Gallons per hottest month (July)

MAXIMUM DAILY WATERING = 1,428 Gallons (assuming two waterings/week)

IRRIGATION GENERAL NOTES

1. THE BASE INFORMATION FOR THIS DRAWING WAS OBTAINED FROM OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE DRAWING WITH ACTUAL FIELD CONDITIONS PRIOR TO BEGINNING ANY WORK AND IMMEDIATELY NOTIFYING THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. IN THE EVENT THAT THE CONTRACTOR BEGINS WORK PRIOR TO VERIFYING AND COMPARING THE BASE INFORMATION WITH ACTUAL FIELD CONDITIONS, THEN ANY CHANGES OR ALTERATIONS TO THE WORK INVOLVED WITH THESE DRAWINGS DUE TO SUCH DISCREPANCIES WILL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND MARKING THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF WORK PRIOR TO BEGINNING CONSTRUCTION. CONTACT THE OWNER, BLUE STAKES OF UTAH AT 811 OR 1-800-662-4111, AND ALL OTHER ENTITIES AS NECESSARY. IN THE EVENT THE CONTRACTOR BEGINS CONSTRUCTION WORK PRIOR TO VERIFYING AND STAKING ALL UTILITIES, AND DAMAGE TO UTILITIES OCCURS, THE DAMAGED UTILITIES WILL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
3. REFER TO LEGENDS, NOTES, AND DETAILS FOR FURTHER INFORMATION.
4. COORDINATE LAYOUT OF THE IRRIGATION SYSTEM WITH OTHER TRADES SO THAT CONSTRUCTION CAN CONTINUE IN A NORMAL SEQUENCE OF EVENTS AND SO THAT WORK OF OTHER TRADES IS NOT DISTURBED ONCE PLACED IN THE FIELD. IN THE EVENT THE CONTRACTOR FAILS TO COORDINATE CONSTRUCTION BETWEEN TRADES AND BY DOING SO, THE CONTRACTOR DAMAGES, DISPLACES OR OTHERWISE CAUSES OTHER TRADES WORK TO BE REINSTALLED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH REPLACEMENT AND/OR RE-INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION LAYOUT OF THE IRRIGATION SYSTEM IN ACCORDANCE WITH THE DRAWINGS TO PROVIDE HEAD TO HEAD AND EMITTER TO EMITTER SPACING AS SHOWN ON THE PLANS AND DETAILS AND. THE LAYOUT MAY ONLY BE MODIFIED AS APPROVED BY THE LANDSCAPE ARCHITECT TO OBTAIN COVERAGE TO SUIT THE MANUFACTURERS STANDARD HEADS INDICATED. ANY SUCH APPROVAL BY THE LANDSCAPE ARCHITECT SHALL OCCUR PRIOR TO ACTUAL PLACEMENT OF THE HEADS IN THE FIELD AND SHALL BE RECORDED ON "AS BUILT" DRAWINGS.
6. ALL INSTALLATIONS OR MODIFICATION TO THE IRRIGATION SYSTEM WILL NOT EXCEED THE DESIGN SUPPLY CAPACITY.
7. MAXIMUM WATER VELOCITY THROUGH IRRIGATION PIPE HAS BEEN DESIGNED NOT TO EXCEED 5.0 FEET PER SECOND AND SHALL IN NO CASE BE GREATER THAN 7.5 FEET PER SECOND.
8. PROVIDE AND INSTALL ALL THE MANUFACTURER'S RECOMMENDED SURGE AND LIGHTNING PROTECTION EQUIPMENT ON ALL CONTROLLERS. AG2401 SURGE SUPPRESSER ON HIGH VOLTAGE; 3 GROUND ROD GRID, 8 FOOT TRIANGLE FOR LOW VOLTAGE.
9. THE IRRIGATION DESIGN IS DIAGRAMMATIC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND TO LOCATE ALL IRRIGATION EQUIPMENT OTHER THAN SPRAY HEADS, ROTORS, EMITTERS AND IN-LINE EMITTERS IN THE CLOSEST LANDSCAPE AREA TO WHERE THE SYMBOL FOR THAT EQUIPMENT HAS BEEN SHOWN ON THE PLANS IN THE SAME SEQUENCE AS SHOWN ON THE PLANS.
10. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PARTS AND MATERIALS REQUIRED TO COMPLETE THE IRRIGATION SYSTEM IN ACCORDANCE WITH THE PLANS, AND DETAILS.
11. ALL LINES SHALL SLOPE TO MANUAL DRAIN (SEE DETAILS). IF FIELD CONDITIONS NECESSITATE ADDITIONAL DRAINS, THESE DRAINS SHALL BE INSTALLED FOR COMPLETE DRAINAGE OF THE ENTIRE SYSTEM. REFER TO DETAILS AND SPECIFICATIONS FOR DRAIN INSTALLATION, SUMP REQUIREMENTS AND DEPTH OF BOTH DRAIN AND SUMP.
12. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL THROTTLE CONTROLS ON ALL SPRINKLER HEADS AND ADJUST VALVES FOR OPTIMUM COVERAGE WITH MINIMAL OVER SPRAY ONTO WALKS, STREETS, WALLS, ETC.
13. INTERRUPTION OF IRRIGATION WATERING IS LIKELY TO OCCUR DUE TO OTHER CONSTRUCTION ACTIVITIES AND WORK ON THE IRRIGATION SYSTEM. ALL EXISTING PLANT MATERIAL TO REMAIN SHALL BE PROPERLY PROTECTED AND CARED FOR THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL HAND WATER PLANTS AS REQUIRED. ANY DAMAGE TO PLANT MATERIAL THAT OCCURS DUE TO THIS CONSTRUCTION OR LACK OF WATER DURING CONSTRUCTION SHALL BE REPAIRED TO THE PRE-CONSTRUCTION CONDITION AT THE EXPENSE OF THE CONTRACTOR.
14. THE IRRIGATION SYSTEM SHOWN ON THE DRAWINGS REPRESENTS AN AUTOMATIC CONTROLLER IRRIGATION SYSTEM SUPPLIED FROM THE MUNICIPAL CULINARY WATER SYSTEM. THE SYSTEM IS DESIGNED FOR A MINIMUM OPERATING PRESSURE OF 70 PSI AT THE IRRIGATION POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION AND REPORT ANY DIFFERENCES TO THE OWNER AND/OR THEIR REPRESENTATIVE.


SLEEVE PIPES UNDER ALL PAVED AREAS
RIVERDALE ROAD STATE ROUTE (SR-26)
7.83 1 1"
8.16 2 1"
8.58 3 1"
EXISTING SIGN TO REMAIN
CONNECT TO WATER LINE SEE CIVIL DRAWINGS.
4 6.33 1"
5 10.4 1"
6 11.2 1"
APPROXIMATE LOCATION OF IRRIGATION CONTROLLER. CONTRACTOR TO COORDINATE ELECTRICAL CONNECTIONS TO CONTROLLER
ELEC
OHE

IRRIGATION_SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
▚	RAIN BIRD XCZ-100-PRB-COM WIDE FLOW DRIP CONTROL KIT FOR COMMERCIAL APPLICATIONS. 1IN. BALL VALVE WITH 1IN. PESB VALVE AND 1IN. PRESSURE REGULATING 40PSI QUICK-CHECK BASKET FILTER. 0.3 GPM-20 GPM	
Ⓕ	FLUSH VALVE AND DRIP INDICATOR (NOT SHOWN) INSTALL NETAFIM TLSOV MANUAL FLUSH VALVE, AND RAINBIRD OPERIND DRIP INDICATOR AT THE END OF EACH DRIP ZONE IN EACH PLANTER, AND OTHER AREAS AS NECESSARY TO WINTERIZE DRIP SYSTEM.	
VALVE NUMBER 1 ⊞ 2 ▒ 3 ▤ 4 ▨ 5 ▦ 6 ▽	AREA TO RECEIVE DRIP EMITTERS RAIN BIRD PCT PRESSURE COMPENSATING THREADED LOW-FLOW BUBBLERS. OFFERED IN 5 GPH, 7 GPH, AND 10 GPH MODELS, WITH 1/2IN. FPT THREADED INLET. LIGHT BROWN = 5 GPH, VIOLET = 7 GPH, AND GREEN = 10 GPH.	30
	Emitter Notes: PCT-05 emitters (1 assigned to each 1 GAL plant)	
	PCT-05 emitters (6 assigned to each 2" CAL plant)	
	PCT-05 emitters (2 assigned to each 5 GAL plant)	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
◪	RAIN BIRD 44-LRC 1" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	
⧖	RESILIENT WEDGE ISOLATION VALVE FOR MAINLINE	
⧗	STOP & WASTE-SHUT OFF VALVE- PER LINE SIZE	
MV	RAIN BIRD PEB 1" 1IN., 1-1/2IN., 2IN. PLASTIC INDUSTRIAL MASTER VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	
BF	WILKINS 375XL 1-1/2" REDUCED PRESSURE BACKFLOW DEVICE IN BLACK GUARDSHACK ENCLOSURE (SIZED TO FIT) WITH INSULATED BLANKET.	
C	RAIN BIRD ESP4-SMTE WITH (1) ESP-SM3 7 STATION OUTDOOR SMART MODULAR CONTROL SYSTEM FOR RESIDENTIAL AND LIGHT COMMERCIAL USE. WALL MOUNT, TIPPING BUCKET RAIN SENSOR THAT MEASURES RAINFALL. ADD LINK2WIFI UPGRADE	
FS	RAIN BIRD UFS-100 1IN. ULTRASONIC FLOW SENSORS, WITH GLASS FILLED NYLON BODY. OPERATING RANGE .3 GPM-50 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE.	
POC	POINT OF CONNECTION 1" CONNECT TO WATER LINE STUB - SEE CIVIL DRAWINGS	
———	IRRIGATION LATERAL LINE: PVC SCHEDULE 40	
- - - -	IRRIGATION MAINLINE: PVC SCHEDULE 40	
▭	PIPE SLEEVE: PVC SCHEDULE 40 SLEEVE SHALL BE A MINIMUM OF TWICE THE NOMINAL SIZE OF PIPE WITHIN. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION	

Valve Callout
# Valve Number
# Valve Flow
#" Valve Size

0 10 20 40
SCALE: 1"= 20'

NORTH

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1 IRRIGATION CONTROLLER-WALL MOUNT

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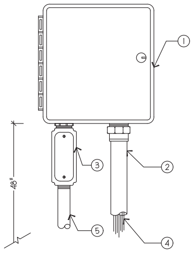


① WALL MOUNTED IRRIGATION CONTROLLER - REFER TO SPECS.

② PVC SCH 80 CONDUIT AND FITTINGS SIZED PER SPECS

③ JUNCTION BOX

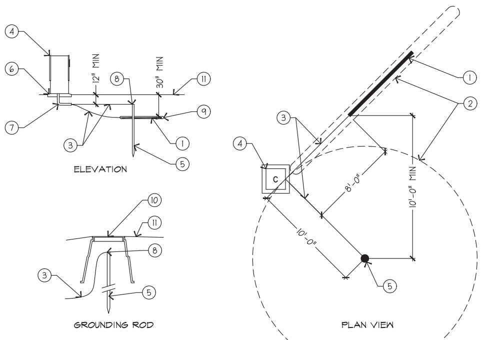
④ WIRES TO REMOTE CONTROL VALVES

⑤ 1-INCH PVC SCH 80 CONDUIT TO POWER SUPPLY (UNLESS SPECIFIED LARGER ON ELECTRICAL DRAWINGS)

NOTE:
BOTTOM OF CONTROLLER TO BE 48" ABOVE FINISH GRADE

2 GROUNDING ROD & PLATE

NTS



① COPPER GROUND PLATE (4" X 96" X .0625")

② ELECTRIC SPHERE OF INFLUENCE BOUNDARIES 1.5' X 24" AND 10' IN DIAMETER

③ #6 AWG SOLID BARE COPPER WIRE (TYP.)

④ IRRIGATION CONTROLLER- SEE CONTROLLER DETAIL

⑤ 5/8" DIAMETER 10' LONG UL LISTED COPPER CLAD GROUNDING ROD

⑥ CONCRETE PAD

⑦ PVC SWEEP ELL 1-1/2" OR LARGER

⑧ CADWELD CONNECTION

⑨ EARTH CONTACT MATERIAL (POWER SET)

⑩ 10" ROUND VALVE BOX

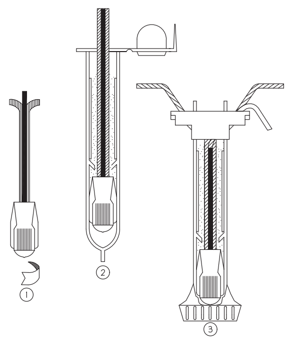
⑪ FINISH GRADE

NOTES:

1. DO NOT INSTALL ANY OTHER WIRES OR CABLE WITHIN THE SPHERE OF INFLUENCE.
2. PLACE 100 LB POWER SET SOIL AMENDMENT TO EACH PLATE AS PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL GROUNDING TO BE TESTED BY CONTRACTOR TO HAVE MAXIMUM RESISTANCE OF 10 OHMS OR LESS PER MANUFACTURER'S RECOMMENDATIONS

3 3M DBR/Y DIRECT BURY SPLICE KIT

NTS



① STRIP WIRES AND APPLY PERFORMANCE PLUS WIRE CONNECTOR R/Y+ ELECTRICAL CONNECTOR IN A CLOCKWISE DIRECTION.

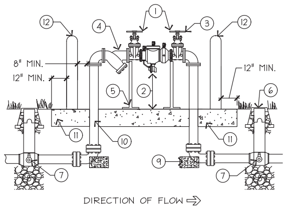
② INSERT SPLICE TO BOTTOM OF GEL FILLED TUBE. VISUALLY CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST THE LOCKING FINGERS AND IS SEATED ON THE BOTTOM OF THE TUBE.

③ POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.

NOTE: SOLDER ALL WIRE CONNECTIONS

4 RP BACKFLOW PREVENTER ASSEMBLY

NTS



① REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER ASSEMBLY (SEE SPECS)

② SPOOL 24" MAX. ABOVE FINISH GRADE

③ SHUT OFF VALVE TYP.

④ LINE SIZE WYE STRAINER (IF SPECIFIED)

⑤ PIPE SUPPORT

⑥ TOP OF BOXES 2" TO TOP OF STAND PIPES

⑦ 3/4" MANUAL DRAIN VALVE TYP. (SEE DETAIL)

⑧ 12" GRAVEL SUMP TYP.

⑨ THRUST BLOCK TYP.

⑩ SPOOL OR GALV. PIPE

⑪ CONCRETE PAD 6" THICK EXTEND 12" BEYOND STEEL BOLLARD

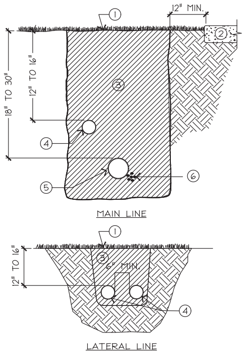
⑫ CONCRETE FILLED STEEL BOLLARD INSTALLED MIN 8" FROM SPOOL

NOTES

1. CONFORM TO COUNTY STANDARDS AND AWWA CODES WHEN CONNECTING WATER MAIN SUPPLY.
2. ALL BACKFLOW PREVENTER ASSEMBLIES ARE TO MEET UTAH STATE CODES.
3. ALL STANDPIPES AND BOXES MUST HAVE PROPER PROVISIONS FOR DRAINING AND FROST PROTECTION.
4. BACKFLOW PREVENTER AND CONCRETE PAD TO BE INSTALLED AT LEVEL GRADE. SLOPE PAD 2% FROM CENTER FOR DRAINAGE. SMOOTHLY TRANSITION SLOPE BACK TO NATURAL GRADE AT HILLSIDE.
5. EDGE OF CONCRETE PAD SHALL BE FLUSH WITH SURROUNDING FINISH GRADE.

5 TRENCHING

NTS



① FINISHED GRADE

② HARDSCAPE SURFACE

③ CLEAN BACKFILL (SHALL CONTAIN NO SHARP OR ANGULAR ROCKS OR ANY ROCK OVER 1" DIA.

④ LATERAL LINE

⑤ MAIN LINE

⑥ CONTROL WIRES

NOTE:

1. ATTACH CONTROL WIRES TO EITHER SIDE OF MAIN LINE WITH DUCT TAPE AT 15 FEET O.C.

6 SLEEVING

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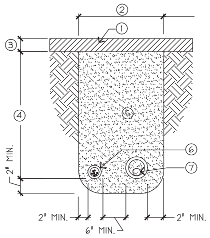


① PROPOSED HARDSCAPE SURFACE

② WIDTH AS REQUIRED

③ VARIES AS PER HARDSCAPE SURFACE

④ DEPTH AS REQUIRED TO MATCH MAIN LINE (18"-30") OR LATERAL LINE (8"-16") OR CONTROL WIRES (18"-30")

⑤ BACKFILL COMPACTED AT 95%.

⑥ CONTROL WIRES 6" TO EITHER SIDE IN CONDUCT SLEEVE PER SPECS.

⑦ MAIN LINE or LATERAL IN SLEEVE

NOTES:

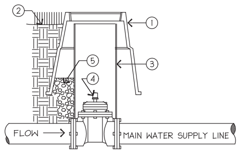
1. ALL SLEEVES SHALL BE SCHEDULE 40 PVC.

2. ALL SLEEVES SHALL BE A MINIMUM OF 4" AND TWICE THE NOMINAL SIZE OF THE PIPE WITHIN.

3. ALL SLEEVING SHALL EXTEND A MIN. OF 18" BEYOND EDGE OF HARDSCAPE.

7 ISOLATION VALVE/STOP & WASTE

1" = 1"



① 10" ROUND CARSON-BROOKS 910 VALVE BOX

② INSTALL BOX AT FINISH GRADE IN TURF AREAS AND LEVEL WITH MULCH IN PLANTING BEDS

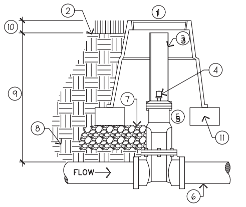
③ 6" PVC SCH. 40 PIPE SLEEVE, 4" - 6" BELOW GRADE

④ ISOLATION VALVE OR STOP & WASTE VALVE - REFER TO IRRIGATION LEGEND

⑤ 6" MIN. DEPTH 3/4" WASHED AGGREGATE

8 RESILIENT WEDGE ISOLATION VALVE

NTS



① 10" ROUND GREEN PLASTIC VALVE BOX, W/BOLT LOCK, CARSON-BROOKS OR EQUAL

② FINISH GRADE

③ 6" PVC SCH. 40 PIPE SLEEBE, 4" - 6" BELOW GRADE

④ 2" SQUARE OPERATING NUT

⑤ RESILIENT WEDGE GATE VALVE - SEE SPECS FOR REQUIREMENTS

⑥ MAIN WATER SUPPLY LINE

⑦ 6" MIN. GRAVEL

⑧ SUBGRADE COMPACTED TO 90%

⑨ DEPTH: 18" - 30"

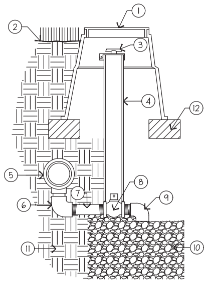
⑩ SHRUBS-2"; SOD-1 1/2"; SEED-1"

⑪ STANDARD BRICK - TYPICAL

NOTES:
EACH FITTING & VALVE BELL MUST BE RESTRAINED TO THE LENGTH OF PIPE NOTED IN THE HARCO DI FITTINGS TABLE USING FITTING TO PIPE RESTRAINT, VALVE TO PIPE RESTRAINT, AND PIPE TO PIPE RESTRAINT AS REQUIRED.

9 MANUAL DRAIN VALVE ASSEMBLY

NTS



① 10" ROUND VALVE BOX W/ LOCK BOLT, CARON-BROOKS 910 OR EQUAL

② FINISH GRADE

③ 906L WEATHERMATIC LOCKING VALVE CAP PERMANENTLY ATTACHED TO SLEEVE. TOP OF MARKER 4" - 6" BELOW GRADE

④ 2" PVC SCH. 40 SLEEVE NOTCHED OVER VALVE

⑤ PVC SCH. 80 TEE & MAIN LINE

⑥ 3/4" PVC SCH. 80 ELBOW

⑦ 3/4" PVC SCH. 80 NIPPLE (LENGTH AS REQUIRED)

⑧ 3/4" FORD B11333 BALL VALVE

⑨ 3/4" MARLEX STREET ELBOW

⑩ GRAVEL SUMP - 18"x18"x12" MIN. SIZE

⑪ SUBGRADE COMPACTED TO 90%

⑫ STANDARD BRICK, TYP.

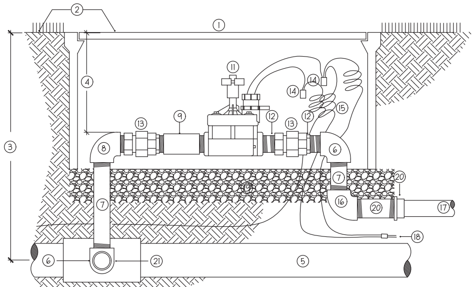
NOTES:

1. ALL PVC NIPPLES TO BE SCH. 80.

2. PROVIDE VALVE KEY TO OWNER.

10 CONTROL VALVE ASSEMBLY

NTS



① STANDARD OR JUMBO VALVE BOX

② INSTALL BOX AT FINISH GRADE IN TURF AREAS AND LEVEL WITH TOP OF MULCH IN PLANTING AREAS

③ 18"-30" MAX. DEPTH

④ MAX. DEPTH 12"

⑤ IRRIGATION MAIN LINE, SIZE AS PER PLANS

⑥ PVC SCH. 80 T X T ELBOW

⑦ PVC SCH. 80 NIPPLE; LENGTH AS REQUIRED (TYP.)

⑧ PVC SCH. 80 T X T ELL SAME SIZE AS VALVE

⑨ SCH. 80 NIPPLE

⑩ (NOT USED)

⑪ ELECTRIC REMOTE CONTROL VALVE - SEE IRRIGATION LEGEND

⑫ SCH. 80 NIPPLE ON EITHER SIDE OF UNION

⑬ PVC SCH. 80 UNION

⑭ WATER TIGHT CONNECTORS (3M DBR/Y ONLY)

⑮ PROVIDE 24" EXPANSION LOOP AT EACH WIRE CONNECTOR IN BOX.

⑯ SCH. 80 ELBOW WITH SCHED. 80 NIPPLE INTO T X T BUSHING TO LATERAL

⑰ IRRIGATION LATERAL LINE, SIZE AS PER PLANS

⑱ CONTROL WIRES

⑲ 6" MIN. DEPTH- 1/2" WASHED AGGREGATE

⑳ THREADED NIPPLE WITH BUSHING

㉑ PVC SCH. 80 TEE SXSXS WITH SCH. 80 SXT BUSHING OR DOUBLE STRAP SADDLE OR HARCO SERVICE TEE.

NOTES:

1. ALL FITTINGS AND NIPPLES IN MANIFOLD SHALL BE SCH. 80 THREADED PVC USING TEFLON TAPE.
2. VALVE MANIFOLD TO BE INSTALLED GOING AWAY FROM MAIN LINE. MINIMUM OF 1 FOOT BEFORE CHANGE IN DIRECTION.

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■ PREPARED FOR:

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■ CONSULTANTS:

PANERA BREAD

4130 RIVERDALE ROAD
RIVERDALE, UTAH

■ REVISIONS:

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△ - -

■ STAMP

MICHAEL WONENBERG
NO. 7456909-5301
8.29.2023

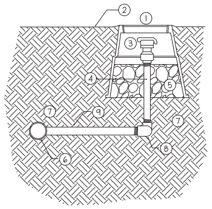
■ SHEET TITLE:

IRRIGATION DETAILS

■ DATE:	10-26-2023
■ DRAWN BY:	ECB
■ CHECKED BY:	MJW
■ JOB NO.:	U22-053

■ SHEET NO:

LI-501



① ROUND VALVE BOX, CARSON BROOKS
② INSTALL BOX AT FINISH GRADE IN TURF AREAS AND LEVEL WITH TOP OF BARK MULCH IN PLANTING AREAS
③ QUICK COUPLER - REFER TO IRRIGATION LEGEND
④ 1" BRASS RISER, LENGTH AS REQUIRED
⑤ 6" MIN. DEPTH 1/2" WASHED AGGREGATE
⑥ IRRIGATION MAIN LINE, SIZE AS PER PLANS
⑦ SUBGRADE COMPACTED TO 95%
⑧ 1" PRE-MANUFACTURED SWING JOINT WITH BRASS THREADED INSERTS.
⑨ 1" SCH 80 NIPPLE, LENGTH AS REQUIRED.

① QUICK COUPLING VALVE ASSEMBLY

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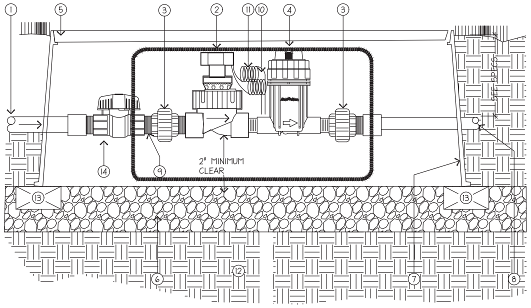

① IRRIGATION MAIN SUPPLE LINE, SIZE AS PER PLANS
② DRIP CONTROL VALVE PER PLANS
③ SCH 80 UNION
④ PRB QUICK-CHECK PRESSURE REDUCING BASKET FILTER
⑤ INSTALL BOX AT FINISH GRADE (TOP OF MULCH OR TURF)
⑥ 6" MIN. DEPTH- 1/2" WASHED AGGREGATE
⑦ CARSON BROOKS VALVE BOX WITH BOLT DOWN LID. SIZE AS NECESSARY TO CONTAIN VALVE, FILTER, AND PRESSURE REGULATOR IN SAME BOX.
⑧ IRRIGATION LATERAL LINE, SIZE AS PER PLANS
⑨ PVC SCH. 80 NIPPLE; LENGTH AS REQUIRED (TYP.)
⑩ WATER TIGHT CONNECTORS (SEE SPECS.)
⑪ PROVIDE 24" EXPANSION LOOP AT EACH WIRE CONNECTOR IN BOX.
⑫ 90% COMPACTED SUB-GRADE
⑬ BRICK FOUNDATION OR PRESSURE TREATED WOOD FRAME
⑭ PVC BALL VALVE (PER KIT)

NOTES:

1. ALL FITTINGS AND NIPPLES IN MANIFOLD SHALL BE SCH. 80 THREADED PVC USING TEFLON TAPE.
2. VALVE MANIFOLD TO BE INSTALLED GOING AWAY FROM MAIN LINE. MINIMUM OF 1 FOOT BEFORE CHANGE IN DIRECTION.
3. LOCATE ALL VALVE BOXES IN LANDSCAPE AREAS UNLESS OTHERWISE INDICATED.

② DRIP CONTROL VALVE ASSEMBLY

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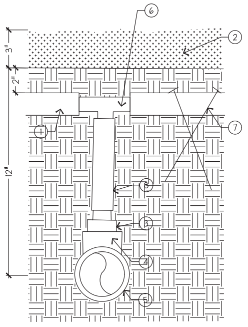

① DRIP TUBING
② MULCH, AS SPECIFIED
③ THREADED MALE DRIP TUBING ADAPTER
④ SCH 40 PVC TEE
⑤ SCH 40 PVC PIPE. SIZE AS NOTED ON THE PLANS.
⑥ COMPATIBLE DRIP TUBING FITTING
⑦ 2 WIRE STAKES 2' O.C. MAX. ANGLED AND CROSSED ALL TUBING
⑧ BLANK TUBING

NOTES:

DRIP TUBING SHALL NOT BE PLACED ON THE SURFACE. IT SHALL BE PLACED 2" BELOW GRADE AS DETAILED. NO EXCEPTIONS.

③ DRIP TUBING CONNECTION

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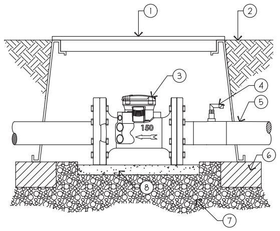
NOTES:

1. AT LEAST TWO (2) PIPE DIAMETERS ARE REQUIRED BOTH UP AND DOWN STREAM BETWEEN FLOWHD AND ANY FITTINGS.
2. AT LEAST FIVE (5) PIPE DIAMETERS BETWEEN A PUMP AND THE FLOWHD.
3. INSTALL A COMBINATION AIR/VACUUM OR CONTINUOUS ACTING AIR VENT RIGHT BEFORE THE FLOWHD (SEE INSTALLATION INSTRUCTIONS).

① 14"x19" VALVE BOX
② GRADE LEVEL
③ 2" FLOWHD FLOW SENSOR
④ AIR/VACUUM VENT
⑤ 2" PVC PIPE
⑥ BRICK SUPPORT
⑦ 1/2" CRUSHED GRAVEL
⑧ CONCRETE PAVER



④ FLOW SENOR

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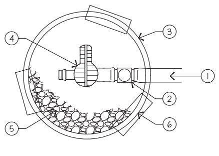
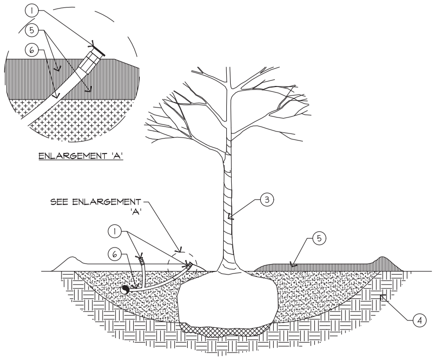
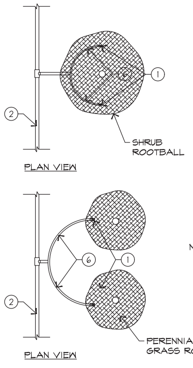


① BLANK TUBING TYP.
② TEE 12" X 18" VALVE
③ BOX (INSTALL PER SPECS)
④ SHUT-OFF VALVE (NETAFIM #TLSOV)
⑤ 3/4" GRAVEL SUMP (FILLING 10" WIDE X 24" DEEP HOLE) WITH FILTER FABRIC ON TOP AND SIDES.
⑥ BRICK FOUNDATION OR PRESSURE TREATED WOOD FRAME





① SEE IRRIGATION SCHEDULE FOR EMITTER QUANTITY. FIRST ROW OF EMITTERS SHALL BE CENTERED BETWEEN TREE TRUNK AND EDGE OF ROOTBALL. SECOND ROW OF EMITTERS SHALL BE PLACED 24" FROM PREVIOUS ROW. HALF OF THE EMITTERS SHALL BE INSTALLED ON ROW ONE AND THE REMAINING EMITTERS ON ROW TWO. PLACEMENT OF EMITTER SHALL BE SPACED EVENLY AROUND TREE AND ROWS SHALL BE OFFSET.
② IRRIGATION LATERAL LINE
③ SEE PLANTING DETAIL
④ UNDISTURBED SUBGRADE
⑤ MULCH
⑥ 1/2" POLETHYLENE SWING PIPE, LENGTH AS NEEDED

NOTES:

1. TREES PLANTED ON SLOPE SHALL HAVE 2 EMITTERS PLACED ON UPHILL SIDE OF ROOTBALL. SHRUB EMITTERS SHALL BE PLACED ON UPHILL SIDE OF ROOTBALL.

⑤ LINE FLUSHING VALVE

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⑥ TREE & SHRUB BUBBLER WATERING

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NO. 7456909-5301
Mike Wonenberg
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■ DATE: 10-26-2023
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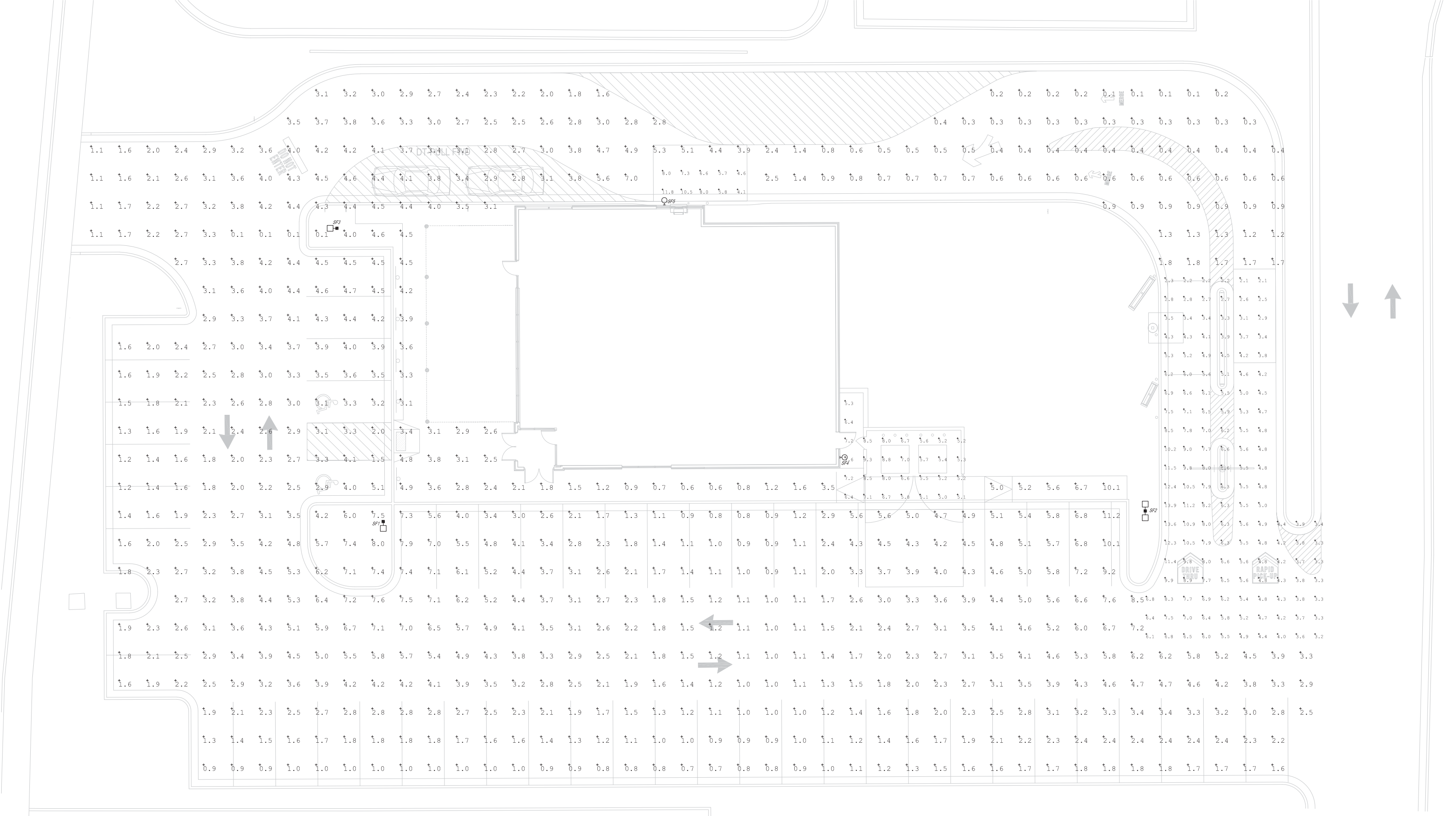
LI-502



A
E1.1
SITE PHOTOMETRIC PLAN
SCALE: 3/32" = 1'-0"

SITE LUMINAIRE SCHEDULE

	LUMINAIRE						LAMPS		POLE			REMARKS
NUMBER	MANUFACTURER	CATALOG #	VOLTS	#/POLE	WATTS	MOUNTING	TYPE	QTY	MANUFACTURER	HEIGHT	DESCRIPTION	
SF1	LITHONIA	[illegible]	UNV	1	[illegible]	POLE	[illegible]	1	LITHONIA	[illegible]	SQUARE STEEL POLE	COORDINATE FINISH COLOR WITH OWNER AND ARCHITECT
SF2	LITHONIA	[illegible]	UNV	2	[illegible]	POLE	[illegible]	2	LITHONIA	[illegible]	SQUARE STEEL POLE	COORDINATE FINISH COLOR WITH OWNER AND ARCHITECT
SF3	LITHONIA	[illegible]	UNV	1	[illegible]	POLE	[illegible]	1	LITHONIA	[illegible]	SQUARE STEEL POLE	COORDINATE FINISH COLOR WITH OWNER AND ARCHITECT
SF4	LITHONIA	[illegible]	UNV	N/A	[illegible]	WALL MOUNT	[illegible]	1	N/A	N/A	N/A	COORDINATE FINISH COLOR WITH OWNER AND ARCHITECT LIGHT FIXTURE TO BE MOUNTED AT [illegible] ABOVE GRADE
SF5	LITHONIA	[illegible]	UNV	N/A	[illegible]	WALL MOUNT	[illegible]	1	N/A	N/A	N/A	COORDINATE FINISH COLOR WITH OWNER AND ARCHITECT LIGHT FIXTURE TO BE MOUNTED AT [illegible] ABOVE GRADE

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Drive approach	Illuminance	Fc	5.73	13.9	2.1	2.73
Order Window	Illuminance	Fc	7.24	11.8	4.1	1.77
Parking Lot	Illuminance	Fc	2.82	11.2	0.1	28.20
Rear Service Door and Dumpster	Illuminance	Fc	6.49	9.3	5.0	1.30

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PANERA BREAD -
RIVERDALE

PROJECT
ADDRESS

DRAWN BY: PCH
CHECKED BY: PCH
PROJECT NO.: 23033.01

NO.	DATE	DESCRIPTION

SITE
PHOTOMETRIC
PLAN

DRAWING NO.
E1.1

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