



Historic Preservation Services
Community Development & Neighborhood Services
281 N. College Ave.
Fort Collins, CO 80524
970.224.6078
preservation@fcgov.com
fcgov.com/historicpreservation

CERTIFICATE OF APPROPRIATENESS

ISSUED: November 6, 2025

EXPIRATION: November 6, 2026

City of Fort Collins
c/o Sean Rogers, Hillside Construction
216 Hemlock St., Ste. B

Dear Property Owner:

This letter provides you with confirmation that the proposed changes to your designated Fort Collins landmark property, the Power Plant at 430 N. College Ave., have been approved by the City's Historic Preservation Division because the proposed work meets the criteria and standards in Chapter 14, [Article IV](#) of the Fort Collins Municipal Code.

- 1) At utility yard at NE corner of historic portion of power plant building – To connect interior turbine and electrolysis system to exterior facilities, sawcut and remove existing concrete in utility yard, excavate and install new concrete trench system, install steel covers, connect through existing building by cutting new opening in foundation between existing building columns and pilasters.

Notice of the approved application has been provided to building and zoning staff to facilitate the processing of any permits that are needed for the work.

Please note that all ensuing work must conform to the approved plans. Any non-conforming alterations are subject to stop-work orders, denial of Certificate of Occupancy, and restoration requirements and penalties.

If the approved work is not completed prior to the expiration date noted above, you may apply for an extension by contacting staff at least 30 days prior to expiration. Extensions may be granted for up to 12 additional months, based on a satisfactory staff review of the extension request.

Property owners can appeal staff design review decisions by filing a written notice of appeal to the Director of Community Development & Neighborhood Services within fourteen (14) days of this decision. If you have any questions regarding this approval, or if I may be of any assistance, please do not hesitate to contact me. I can be reached at yjones@fcgov.com or at 970-224-6078.

Sincerely,

Yani Jones
Historic Preservation Planner

Applicable Code Standard	Summary of Code Requirement and Analysis (Rehabilitation)	Standard Met (Y/N)
SOI #1	<i>A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships;</i> This project does not change the current use of the Power Plant.	Y
SOI #2	<i>The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.</i> The Power Plant was constructed in 1936 in a Moderne style and generated electricity for the local community until the 1970s. The landscaped grounds and site features, including the WPA fountain and grotto, surrounding the building reflect national trends associated with the City Beautiful movement. This project has a minimal impact on the historic property's character because it removes a minor amount of historic material at the foundation of the building and otherwise impacts an existing non-historic utility yard. The concrete work proposed would not have a negative impact on the historic building or the surrounding significant site features. This Standard is met.	Y
SOI #3	<i>Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.</i> This project does not create a false sense of historical development because it is clearly a modern alteration.	Y
SOI #4	<i>Changes to a property that have acquired historic significance in their own right will be retained and preserved.</i>	N/A
SOI #5	<i>Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.</i> This project minimally impacts the historic building by creating a new opening in the foundation while avoiding existing columns and pilasters. This conforms to this Standard.	Y

SOI #6	<i>Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.</i>	N/A
SOI #7	<i>Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.</i>	N/A
SOI #8	<i>Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.</i>	N/A
SOI #9	<i>New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.</i> This exterior alteration does require some minor removal of foundation material, but such removal of material is minimal. The new work mainly impacts a non-historic utility yard at the north-east corner of the building, which is at the building's rear. The project will not negatively impact the integrity of the historic building or the significant site features around it. This Standard is met.	Y
SOI #10	<i>New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.</i>	N/A



Tenant Finish Checklist (fill out as it pertains to the project scope).

Check before submitting. Separate and addition submittals may be required.

***If required, it is the applicant's responsibility to attain approvals from the following entities, some of which may be required for permit issuance.

No	Floodplain: Is any portion of the building located in a floodplain? https://www.fcgov.com/floodplain-maps
NO	Historic: Is the building historically designated? www.fcgov.com/historicpreservation
Yes	Zoning: Is the use of the building allowed in this zone? https://www.fcgov.com/zoning/
No	Poudre Fire Authority: 102 Remington St. / (970)-416-2891 / https://www.poudre-fire.org/online-services/contractors-plan-reviews-and-permits 1. Most commercial remodels require a separate and addition permit (see link above to submit). 2. Fire suppression system modifications require a separate and addition permit (see link above to submit).
No	Larimer County Health Department: 1525 Blue Spruce Dr. / (970)-498-6785 / https://www.larimer.org/health A separate and additional submittal are required for the service, preparation, or processing of food or drinks; daycare facilities; schools; and healthcare.
No	Engineering Department: https://www.fcgov.com/engineering/inspection.php Work impacting or encroaching into the Public Right-of-way
Yes	Does the scope of work involve more than one trade (Electric, plumbing, framing)?
	☒ A licensed general contractor is required
	☒ The single permit will include all subtrades which need to be listed on the permit application
Yes	Is demolition occurring?
	An optional demolition permit is available prior to tenant finish permits being issued. See: commercial demo guide
	See separate, additional State requirements for asbestos: https://cdphe.colorado.gov/indoor-air-quality/asbestos

Building Permit Submittal Checklist

Yes	Tenant Finish Building Permit Application
Yes	Owner Authorization Form
No	Construction Waste Management Plan (required for a scope of work more than 2,500 sf)
Yes	This checklist filled out and all documents in this checklist must follow the electronic document submittal guide .
Yes	Plan check fee
Yes	Site Plan (only if exterior work is being proposed i.e. attached patio cover, dining patio etc.)
Yes	Plans Set must include all the following <i>as it pertains to the project scope</i> : <i>Example: If no plumbing work is occurring, check NA. If plumbing work is occurring, plans should contain plumbing drawings.</i>
Yes	All plans must reflect the current adopted codes
Yes	A <i>fully stamped set of plans</i> is required if any of these conditions apply: 1. Scope of work exceeds 5,000 sq ft 2. First Tenant to occupy a space 3. Change of Occupancy (architect evaluation letter can be submitted where no/minor work is being done).
No	Floor Plans: ☐ Existing AND ☐ Proposed (include room labels, square footages, dimensions, drawn to scale).
No	Accessibility drawings: if there are accessibility improvements (i.e. wheelchair accessible restrooms, ramps etc.).
yes	Drawing Details: such as wall sections, fire rated assemblies, stair and guardrail details, door operation and locking, interior and exterior elevations (i.e. restroom elevations).
No	Energy Code items per the IECC (lighting comcheck, insulation details, mechanical ventilation, etc.)
Yes	Structural drawings: Including structural evaluations for weight added to existing roofs (RTU's, condensing units, etc.) ***All structural drawings/evaluation letters must be stamped.
No	Mechanical Drawings: showing items such as heating/cooling equipment, ductwork, exhaust, hoods, ventilation, special equipment, or systems. ***Stamped mechanical engineered drawings are required for full new mechanical systems (I.E.: new ductwork + new RTU).
No	Plumbing Drawings: showing waste and vent diagrams, water supply, plumbing fixtures, water heaters, gas lines, grease interceptors, special systems, and equipment.
No	Electrical Drawings: Includes outlets, lighting, panels, and special equipment. New 3 phase service or service change more than 225 amps requires an engineered + stamped electrical One-Line Check any that apply: ☐ New electric service ☐ Electric meter relocation

Applicant's Name: Sean Rogers

Date: 10-29-2025

Job site address: 430 North College Avenue

E-Mail Address: srogers@hillsideconst.com



BUILDING PERMIT APPLICATION:

Tenant Finish (commercial)

All information on the application must be filled out (as applicable).

JOB SITE ADDRESS: 430 North College Avenue **UNIT#:** _____

PROPERTY OWNER INFO: (All owner information is required – NOT optional)

Last Name Colorado State University First Name Research Foundation Middle _____
Street Address 430 North College Avenue City Fort Collins State CO Zip 80524
Phone # 970-491-2933 Email bo.brown@colostate.edu

CONTRACTOR INFO:

Company Name Hillside Construction Inc.
License Holder Name Sean Rogers LIC # B-423 CERT # 2771-B

CONSTRUCTION INFO:

1. Name of Business (fill in info below related to tenant): Powerhouse Energy Campus

Existing Tenant ☒ New Tenant ☐ First tenant/occupant in a new building/space ☐

Name of prior tenant/business (or prior use): _____

Proposed Use: _____

2. Are there any exterior building changes (including mechanical) associated with the work? Yes ☒ No ☐

Describe: Exterior Concrete Trench Systems per Attached Drawings from Corbel Engineering

3. Scope of Work Square Footage (leave blank where work is not occurring):

1st Floor Sq Ft _____ + 2nd Floor Sq Ft _____ + 3rd Floor Sq Ft _____ + 4th Floor Sq Ft _____
+ 5th Floor Sq Ft _____ + 6th Floor Sq Ft _____ + 7th Floor Sq Ft _____ Other _____
+ Unfin. Bsmt Sq Ft (remain unfin.) _____ + Fin Bsmt Sq Ft (to be fin.) _____ = Total Scope of Work Sq Ft _____

4. What is being added to the space (not previously existing/currently present)?:

of Full Baths _____ # ¾ Baths _____ # ½ Baths _____ # Fireplaces _____

5. Is the building currently fire sprinkled? Yes ☐ No ☐

6. Asbestos Disclosure:

In accordance with the State of Colorado Senate Bill 13-152, property owners, applying for a remodel permit, shall indicate their awareness about their property having been inspected for Asbestos Containing Materials (ACM's).

☒ I do not know if an asbestos inspection has been conducted on this property

☐ An asbestos inspection has been conducted on this property on or around the date of: _____

☐ An asbestos inspection has not been conducted on this property

UTILITIES INFO:

Electric Service Upgrade Yes ☐ No ☒ Existing Amps _____ New Amps _____
Electric Meter Relocation Yes ☐ No ☒

VALUE OF CONSTRUCTION (*materials and labor*): \$ 37,148.00

DESCRIPTION OF WORK:

Sawcut existing concrete systems, remove concrete, excavate for new concrete trench systems,
form/pour/finish concrete trench system, installation of steel insert/covers, backfill foundation systems,
complete concrete walks to new trench system.

JOBSITE SUPERVISOR CONTACT INFO: Name Sean Rogers Phone 970-567-1821

SUBCONTRACTOR INFO:

Electrical N/A Structural Framing (wood only) N/A Mechanical N/A
Plumbing N/A Fireplace N/A Roofing N/A

Applicant: I hereby acknowledge that I have read this application and state that the above information is correct and agree to comply with all requirements contained herein and City of Fort Collins ordinances and state laws regulating building construction.

Applicant Signature Sean Rogers Digitally signed by Sean Rogers
Date: 2025.10.29 06:29:31 -0600

Type or Print Name Sean Rogers

Phone # 970-568-2772

Email srogers@hillsideconst.com

THIS APPLICATION EXPIRES 180 DAYS FROM APPLICATION DATE



Planning, Development & Transportation
281 N. College Ave P.O. Box 580
Fort Collins, CO 80524
Phone 970-416-2740 Fax 224-613

BUILDING OWNER AUTHORIZATION TO OBTAIN A COMMERCIAL BUILDING PERMIT

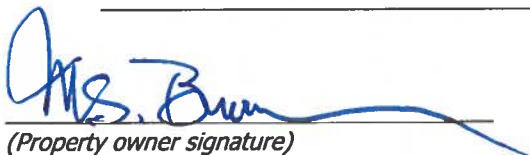
When an entity is the owner of a property, such as a trust or LLC, a Certificate of Organization or Articles of Organization showing the person signing this owner authorization form is the legal representative for the entity signing (trust/LLC etc.) with legal signing rights will need to be submitted with this document.

I, (Print) Colorado State University Research Foundaton as owner of record (property address) 430 North College Avenue known as (name of business) Powerhouse Energy Campus hereby authorize the work listed below to be done on said property. I understand that such work will **only be performed by contractors licensed by the City of Fort Collins.**

☐ I am giving permission for **interior work only**. The scope of the work shall be limited to: _____

☒ I am giving permission for **exterior work only**. The scope of the work shall be limited to: Exterior concrete trench system at North East side of existing Powerhouse building per attached structural drawings.

☐ I am giving permission for **interior and exterior work**. The scope of the work shall limited to : _____

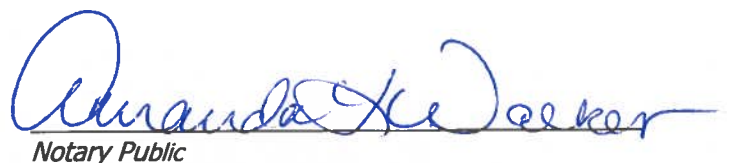

(Property owner signature)

Michael S. 'Bo' Brown
(Property owner name; please print)

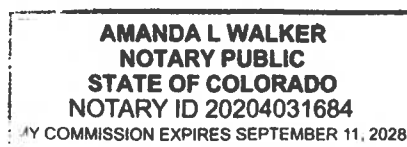
The foregoing affidavit was acknowledged before me on the 22nd day of October 2025 (month, year) by Michael S Brown for the purpose therein set forth.

Witness my hand and official seal.

My Commission expires: 9/11/2028


Notary Public

Permit # _____
Office use only



June 25, 2025

Ralph Campano
Real Estate Services Manager
City of Fort Collins
300 Laporte Ave, Building B
Fort Collins, CO 80521

Dear Ralph,

As the managing landlord of the Powerhouse Energy Campus located at 430 N. College Ave, CSU STRATA is requesting approval for the following building alteration from the City of Fort Collins, as the property owner and lessor under the Lease Agreement between the City and CSU dated February 29, 2012 ("Lease").

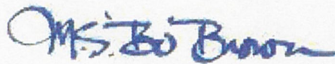
The request for this work is related to commissioning a 3.5 MWe liquid-fueled gas turbine and a hydrogen-generating electrolysis facility at the CSU Energy Institute's Powerhouse Energy Campus. To support the integration of essential infrastructure and equipment into these test beds, several modifications are required within the adjacent utility yard. The scope of the project includes:

- **Excavation of a trench** through existing concrete to accommodate the routing of piping and electrical conduit between the indoor and outdoor facilities.
- **Drilling a rectangular slot** into the building's structure allows seamless piping transitions between interior systems and external equipment located in the utility yard.
- **Removal of security fencing** to enable secure and efficient access to modified and newly installed equipment.

These upgrades are critical for enabling full operational capability and connectivity between the research facilities and the associated utility systems. Please see the attached Scope of Work document for full details.

The CSU Energy Institute will complete these activities in accordance with Article VIII and any other applicable provisions of the Lease and will obtain all permits as well as fulfill any requirements that that may be required by federal, state or local jurisdictions during the project. We agree with the CSU Energy Institute that these efforts are in support of the research mission of the Powerhouse Energy Campus and support the activities as described above.

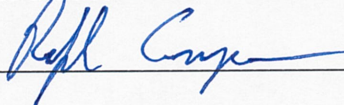
Sincerely,



Digitally signed by M.S. 'Bo' Brown
Contact Info: Sr. Facilities Manager CSU STRATA
Date: 2025.06.26 15:45:18-06'00'

Michael S. 'Bo' Brown
Senior Facilities Manager
CSU STRATA

Property Owner has agreed to the above-described activities relative to the Leased Premises.

Property Owner Signature:  Date: 8-5-2025

Ralph Campano
Real Estate Services Manager, City of Fort Collins

GENERAL REQUIREMENTS

- THESE DRAWINGS AND ASSOCIATED DOCUMENTS ARE THE INTELLECTUAL PROPERTY OF CORBEL ENGINEERING, LLC AND ARE INTENDED SOLELY FOR USE ON THE SPECIFIED PROJECT.
- THE DOCUMENTS MAY NOT BE REPRODUCED IN WHOLE OR IN PART FOR USE ON PROJECTS OTHER THAN IDENTIFIED IN THE TITLE BLOCK.
- DO NOT SCALE THE PLANS AND DETAILS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
- WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES AND/OR SPECIFICATION CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. THE MORE STRINGENT REQUIREMENT SHALL GOVERN FOR BIDDING AND PRICING.

CONSTRUCTION MEANS AND METHODS

- THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS, DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION THAT MAY AFFECT THE PROJECT AND REPORT DISCREPANCIES TO THE ENGINEER.
- WHEN THE CONTRACTOR BECOMES AWARE OF WHAT MAY BE AN UNFORESEEN CONDITION OR A VARIANCE WITH THE PROJECT DOCUMENTATION AFFECTING DESIGN ASSUMPTIONS, COST OR SCHEDULE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT.

CODES AND STANDARDS

- PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS:
- GOVERNING JURISDICTION: CITY OF FORT COLLINS, COLORADO
 - BUILDING CODES: IBC 2021, INTERNATIONAL BUILDING CODE
 - LOADS: ASCE 7-16
 - CONCRETE: ACI 318-19(22), BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

SOIL PREPARATION AND FOUNDATIONS

- THE FOUNDATION SYSTEM IS DESIGNED USING PRESUMPTIVE SOIL BEARING CAPACITIES FROM TABLE 1806.2 OF THE 2021 IBC.
- REMOVE TOP SOIL CONTAINING ORGANIC MATERIAL.
- DESIGN BEARING PRESSURE (NET) IS 1,500 PSF FOR FOUNDATIONS BEARING ON 4" MIN. OF GRANULAR STRUCTURAL BASE COURSE MATERIAL PLACED OVER PROOF-COMPACTED NATIVE SOILS. BEARING MATERIALS SHALL BE VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER.

CONCRETE REINFORCING

- DETAIL BARS IN ACCORDANCE WITH THE DRAWINGS, PROJECT SPECIFICATIONS, AND ACI PUBLICATION SP-66: "ACI DETAILING MANUAL"
- REINFORCING MATERIALS:

REINFORCING STEEL:	ASTM	GRADE
WELDABLE REINFORCING STEEL	A615	60
ANCHOR RODS (BOLTS):	A706	60
	F1554	55 W/S1 (WELDABILITY)
- SHOP DRAWINGS SHALL BE SUBMITTED WITH REINFORCING STEEL IN ACCORDANCE WITH ACI 315. MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR'S SHOP UNLESS NOTED.
- DETAILS:
 - WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS NOTED OTHERWISE. WHEN WELDING IS APPROVED, WELDING SHALL BE IN ACCORDANCE WITH AWS D1.4 "WELDING REINFORCING STEEL, ETC."
 - NO SPLICING OF REINFORCEMENT PERMITTED EXCEPT AS NOTED ON DRAWINGS. MAKE BARS CONTINUOUS AROUND CORNERS WHERE DETAIL NOT PROVIDED. WHERE PERMITTED, SPLICES MAY BE MADE BY CONTACT LAPS OR MECHANICAL CONNECTORS. WHEN MECHANICAL CONNECTORS ARE INDICATED ON THE PLANS, THE CONNECTOR SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING STEEL. REQUESTS BY THE CONTRACTOR FOR MECHANICAL SPLICES MUST BE SUBMITTED IN WRITING.
- REINFORCING STEEL SHALL BE LAPPED PER CONCRETE REINFORCEMENT LAP TABLE.
- PLACEMENT:
 - PROVIDE ACCESSORIES NECESSARY TO PROPERLY SUPPORT REINFORCING AND WELDED WIRE REINFORCEMENT AT POSITIONS SHOWN ON PLANS. PROVIDE ADDITIONAL BARS OR STIRRUPS REQUIRED TO SECURE REINFORCING IN PLACE. ALL REINFORCING, DOWELS, BOLTS, AND EMBEDDED PLATES SHALL BE SET AND TIED IN PLACE BEFORE THE CONCRETE IS POURED. "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.
 - PROVIDE ADDED REINFORCING TO TRIM ALL OPENINGS, NOTCHES, AND REENTRANT CORNERS AS NOTED IN TYPICAL DETAILS OR WITH (2)#5 MIN. ON ALL SIDES EXTENDING BEYOND OPENING 24" MIN.
 - PROVIDE CORNER BARS OF THE SAME SIZE AND SPACING AS ADJACENT REINFORCING.
 - MAINTAIN ACI CLEAR COVER ON REINFORCING AS LISTED BELOW UNLESS NOTED OTHERWISE.

CAST AGAINST EARTH (BOTTOM OR SIDES):	3"
FORMED - EXPOSED TO SOIL, WEATHER OR LIQUIDS:	2"
SLABS ON GRADE (FROM TOP OF SLAB):	1.5"
EXTERIOR PAVING (FROM TOP OF SLAB):	2"

GRATING AND FLOOR PLATE

- GRATING SHALL BE CONNECTED TO SUPPORTS PER MANUFACTURER'S RECOMMENDATIONS, USING ANCHOR AND CLIP ASSEMBLIES UNLESS NOTED OTHERWISE.
- STEEL GRATING SHALL BE Banded, WELDFORGED, WELDED, RECTANGULAR DESIGN. MAIN BEARING BARS SHALL BE AS NOTED ON PLAN; CROSS BARS SHALL BE RESISTANCE WELDED AT RIGHT ANGLES TO BEARING BARS AND AT 4" ON CENTER MAXIMUM.
- FINISH SHALL BE GALVANIZED.

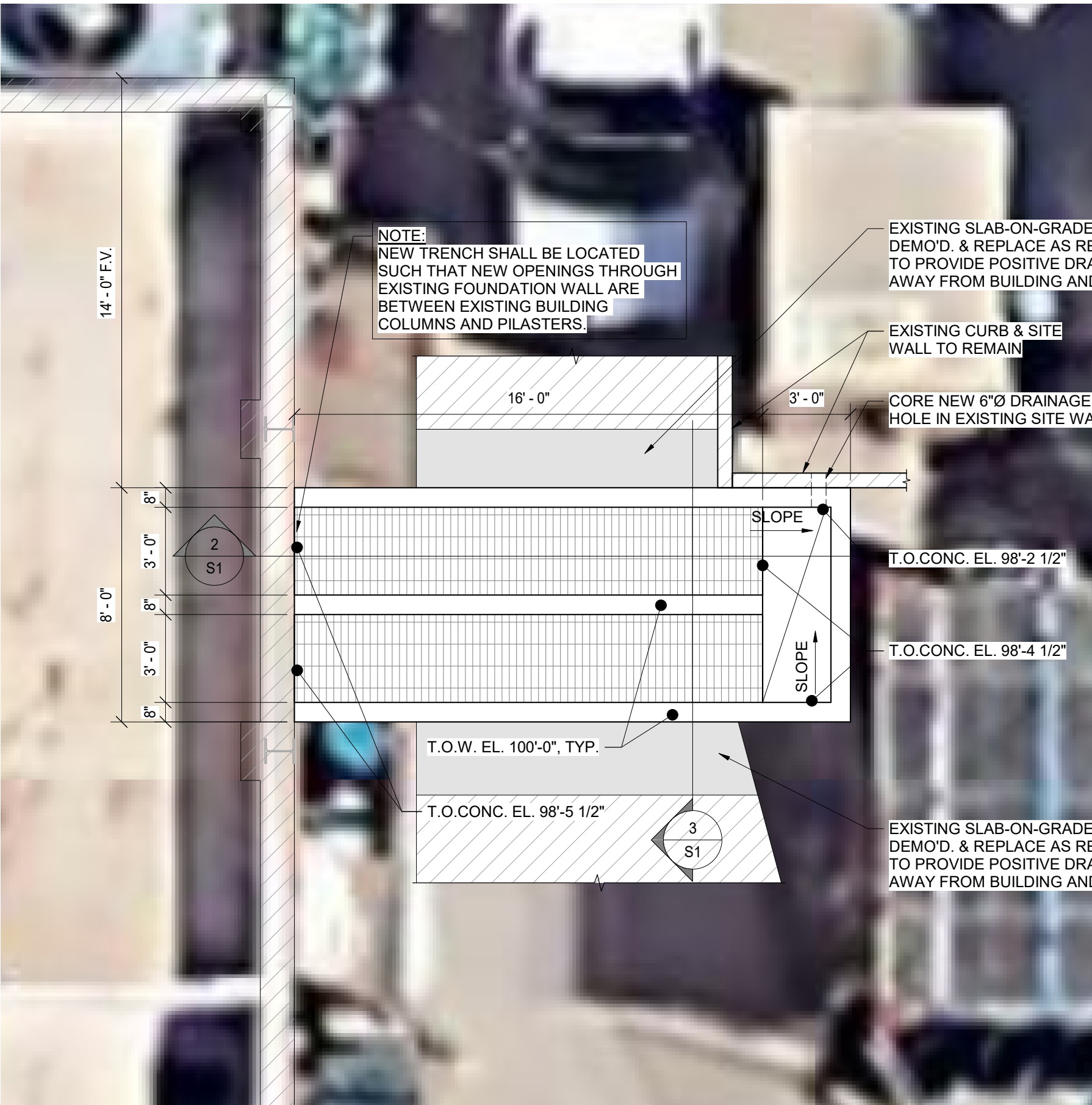
MISCELLANEOUS METALS

- ALL CONNECTIONS SHALL BE COMPATIBLE WITH MATERIALS BEING CONNECTED UNLESS FULLY ISOLATED WITH A DIELECTRIC MATERIAL.

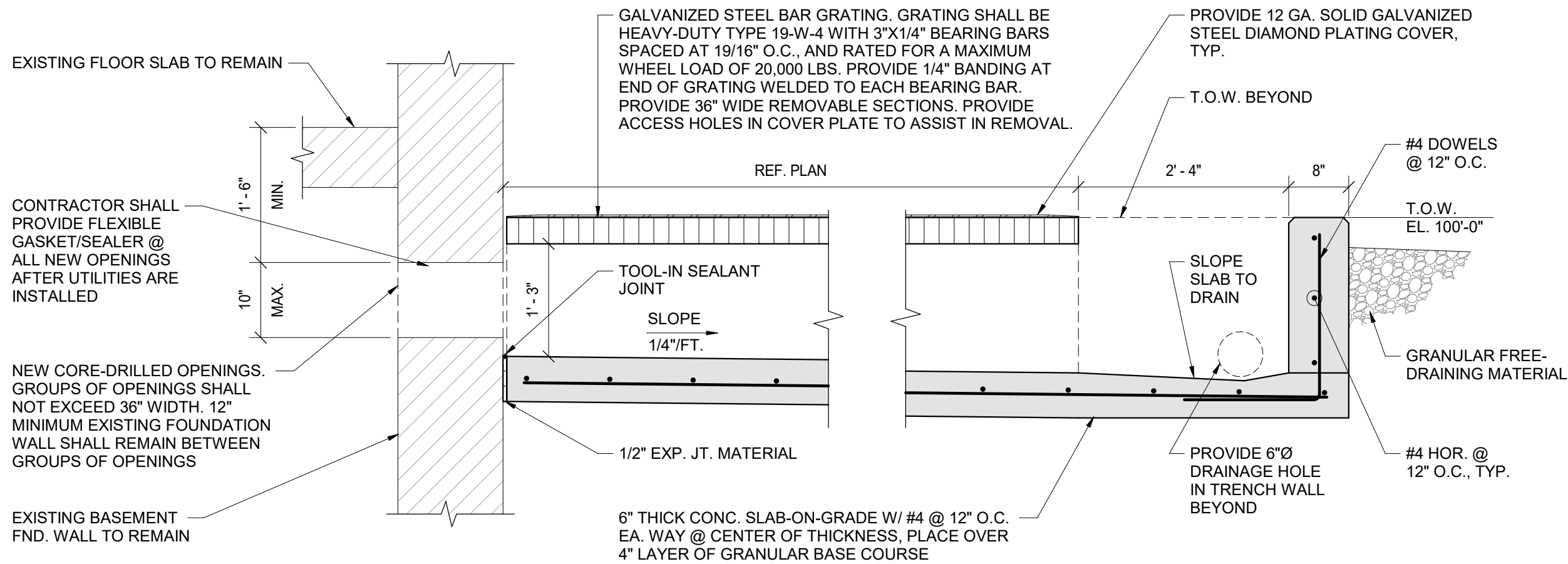
CONCRETE

- ALL WORK SHALL CONFORM WITH THE LATEST VERSION OF ACI 301.
- CONCRETE MIX DESIGNS ARE A PERFORMANCE SPECIFIED ITEM DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE MIX MEETING THE REQUIREMENTS SPECIFIED BELOW.
- CONCRETE MIX REQUIREMENTS:
 - MIX REQUIREMENTS ARE:

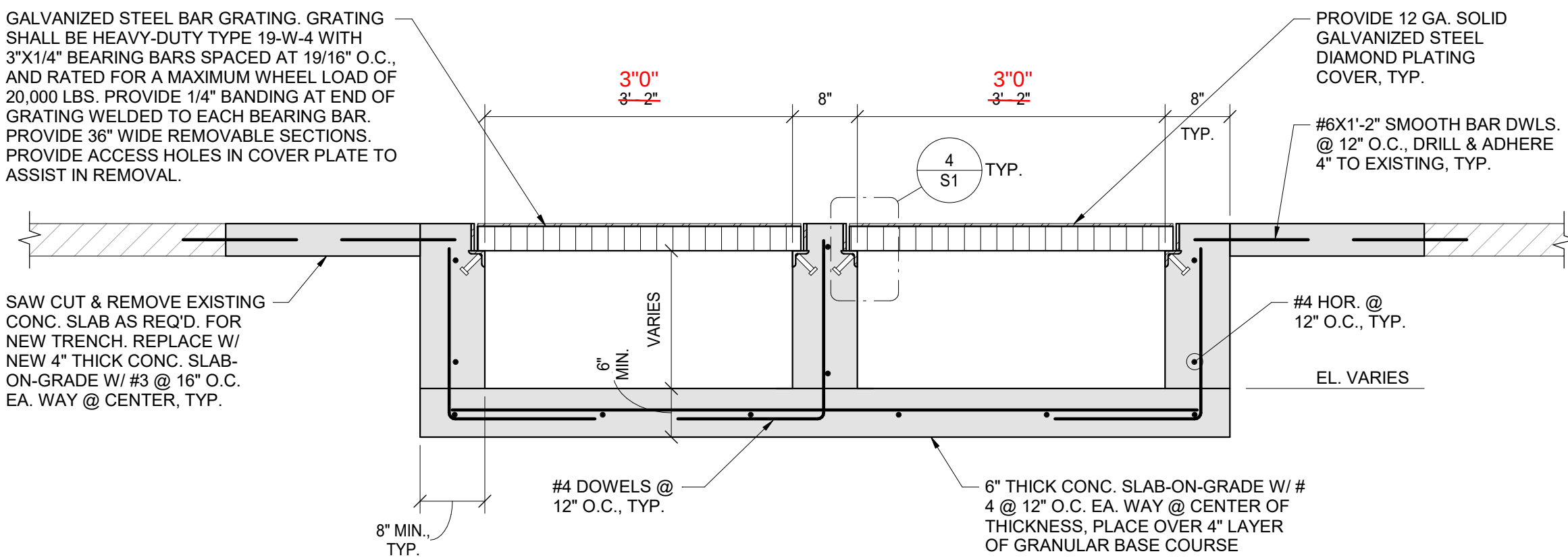
LOCATION	EXPOSURE CLASS	MIN. F _c	MAX. W/C	MAX. AGG. SIZE	AIR CONTENT
SLABS AND WALLS	F3-S1-W1-C2	4,500	0.45	3/4"	6%±1.5%
 - FOR CONCRETE MIXTURES ASSIGNED TO EXPOSURE CLASS F3, THE MAXIMUM PERCENTAGE OF CEMENTITIOUS MATERIAL WHICH IS CLASSIFIED AS SCM (INCLUDING FLY ASH, NATURAL POZZOLANS, SILICA FUME, AND SLAG CEMENT) SHALL BE AS FOLLOWS. THE INDIVIDUAL LIMITS SHOWN BELOW SHALL APPLY REGARDLESS OF THE NUMBER OF CEMENTITIOUS MATERIALS IN THE CONCRETE MIXTURE.
 - FLY ASH OR NATURAL POZZOLANS CONFORMING TO ASTM C618 = 25%
 - SLAG CEMENT CONFORMING TO ASTM C989 = 50%
 - SILICA FUME CONFORMING TO ASTM C1240 = 10%
 - TOTAL OF FLY ASH OR OTHER POZZOLANS AND SILICA FUME = 35%
 - TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT, AND SILICA FUME = 50%
 - BASED ON THE SULFATE CLASSIFICATIONS LISTED THE FOLLOWING CEMENTS SHALL BE USED:
 - S0 AND S1 SULFATE CLASSIFICATION: PORTLAND CEMENT ASTM C150 TYPE III OR BLENDED HYDRAULIC CEMENT ASTM C595 TYPE II
 - S2 AND S3 SULFATE CLASSIFICATIONS: PORTLAND CEMENT ASTM C150 TYPE V OR BLENDED HYDRAULIC CEMENT ASTM C595 TYPE II WITH "HS" DESIGNATION, CALCIUM CHLORIDE ADMIXTURES NOT PERMITTED. MINERAL FILLERS DERIVED FROM CARBONATE AGGREGATE ARE PROHIBITED. AT CONTRACTOR'S OPTION, ACCEPTABLE IN LIEU OF TYPE V OR TYPE "HS" TO PROVIDE ALTERNATE CEMENTITIOUS MATERIALS FOR SULFATE EXPOSURE AND RESISTANCE CONFORMING TO ACI 318-19 26.4.2.2(C)
 - FOR CONCRETE MIXTURES ASSIGNED TO W1 OR W2 CLASSES, EVIDENCE SHALL BE SUBMITTED THAT THE CONCRETE MIXTURE COMPLIES WITH THE FOLLOWING
 - AGGREGATES ARE NOT ALKALI-SILICA REACTIVE OR MEASURES TO MITIGATE ALKALI-SILICA REACTIVITY HAVE BEEN ESTABLISHED
 - AGGREGATES ARE NOT ALKALI-CARBONATE REACTIVE
 - MAXIMUM CHLORIDE ION LIMITS (PERCENTAGE BY MASS OF CEMENTITIOUS MATERIALS INCLUDING SCM) ASSOCIATED WITH EXPOSURE CLASS ARE AS FOLLOWS:
 - C0 = 1.00
 - C1 = 0.30
 - C2 = 0.15
 - FINE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33. COARSE AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33, GRADE # 67 FOR 3/4" AND GRADE #57 FOR 1" OR LARGER. COARSE AGGREGATES SHALL BE NO LESS THAN 50% OF THE TOTAL AGGREGATE BY WEIGHT, UNLESS APPROVED BY THE ENGINEER PRIOR TO MIX DESIGN SUBMITTAL.
 - ALL CONCRETE ADMIXTURES SHALL, WHEN MIXED INTO CONCRETE, BE NON-CHLORIDE AND NON-CHLORIDE FORMING. ALL ADMIXTURES MUST CONFORM TO ASTM C-494 AND C-260. CONCRETE CURING COMPOUND AND SEALERS SHALL MEET ASTM C-309 TYPE 1 OR 1D.
 - CONTRACTOR MAY ADJUST SLUMP AS NECESSARY FOR FIELD CONDITIONS, INSTALLATION METHOD USED, AND WORKABILITY PROVIDED REMAINING REQUIREMENTS ARE MET. USE ADMIXTURES AS REQUIRED TO OBTAIN DESIRED RESULTS.
 - FOR CONCRETE PLACED BY PUMPING, INCREASED ENTRAINED AIR MAY BE USED TO FACILITATE PUMPING PROVIDED CONTRACTOR CAN DEMONSTRATE CONCRETE WITH ENTRAINED AIR WILL HAVE A FINISH ACCEPTABLE TO THE ARCHITECT.
 - CONTRACTOR SHALL PROVIDE CONCRETE WITH REDUCED WATER IN ORDER TO ACHIEVE SLAB VAPOR TRANSMISSION REQUIRED FOR THE SPECIFIED FLOORING MATERIALS. COORDINATE REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING AND SHORING.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED OR TOOLED TO 3/4", UNLESS NOTED OTHERWISE.
- NO ALUMINUM SHALL BE EMBEDDED IN CONCRETE. CONDUITS AND PIPING EMBEDDED IN CONCRETE WALLS, SLABS, OR BEAMS SHALL BE SPACED A MINIMUM OF FOUR DIAMETERS AND THE OUTSIDE DIAMETER SHALL BE LESS THAN 30% OF THE MEMBER THICKNESS AND PLACED BETWEEN LAYERS OF REINFORCING.
- NO CONDUIT MAY BE EMBEDDED IN SLABS-ON-DECK OR SLABS-ON-GRADE, UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE ON STRUCTURAL PLANS.



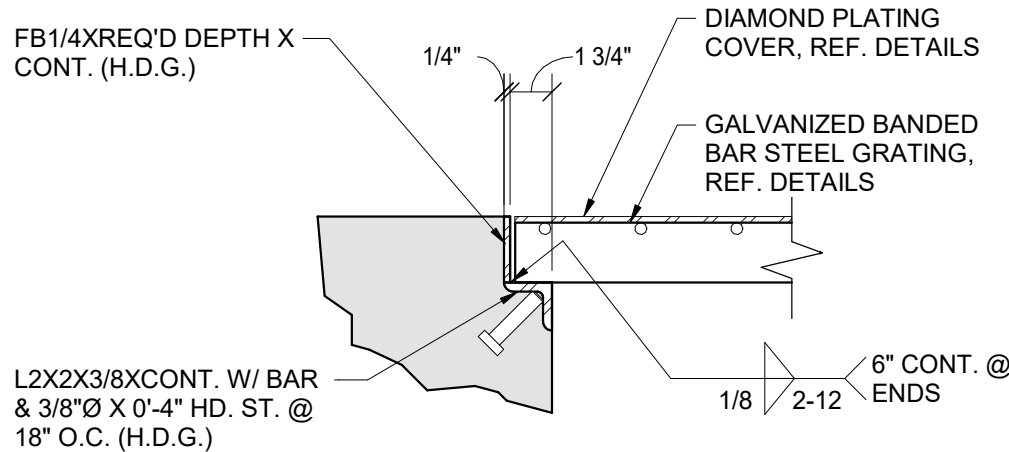
1 Trench Layout Plan
1/4" = 1'-0"



2 UTILITY TRENCH DETAIL
3/4" = 1'-0"



3 UTILITY TRENCH DETAIL
3/4" = 1'-0"



4 TYPICAL GRATING SUPPORT DETAIL
1 1/2" = 1'-0"

Date	
Description	
No.	

TRENCH
LAYOUT PLAN
& DETAILS

Project number	250063
Date	7/2/2025
Drawn by	CBW
Checked by	CRM

SHEET NUMBER

S1

