



SHEET INDEX:

G0.03 - CURVEY
G0.04 - SURVEY

C.01 - CIVIL COVER SHEET
C.02 - GENERAL CONSTRUCTION NOTES
C.03 - DEMOLITION PLAN
C.04 - CIVIL SITE PLAN
C.05 - UTILITY COMPOSITE PLAN
C.06 - STORM DETAIL
C.07 - SANITARY DETAIL
C.08 - SANITARY DETAIL
C.09 - HORIZONTAL PLAN
C.10 - GRADING PLAN

L1.01 - TREE REMOVAL PLAN

A1.00 - ARCHITECTURAL SITE PLAN
A2.00 FOUNDATION CONTROL PLAN

S0.00 - STRUCTURAL GENERAL NOTES
S0.01 - STRUCTURAL GENERAL NOTES
S0.02 - STRUCTURAL GENERAL NOTES
S0.03 - TESTING AND INSPECTIONS
S0.04 - TESTING AND INSPECTIONS
S2.01 - LEVEL 01 FOUNDATION PLAN
S3.00 - TYPICAL FOUNDATION SECTIONS
S3.01 - TYPICAL FOUNDATION SECTIONS
S3.03 - FOUNDATION SECTIONS

E0.01 - ELECTRICAL ONE-LINE DIAGRAM
E1.1 - ELECTRICAL POWER PLAN



TERMINAL
 GRAND JUNCTION, CO

PHASE 0 - RFP SET
2.13.26

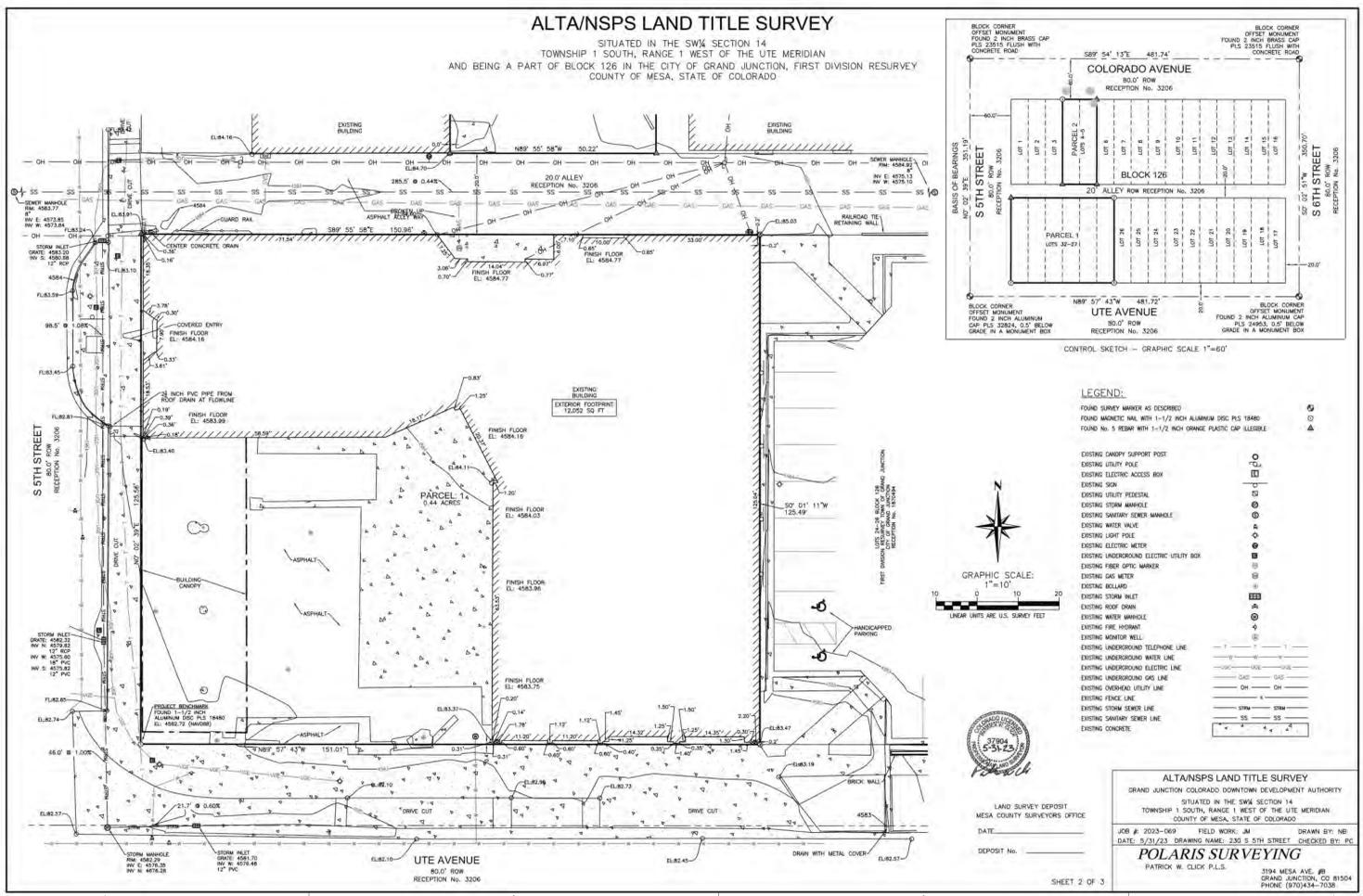
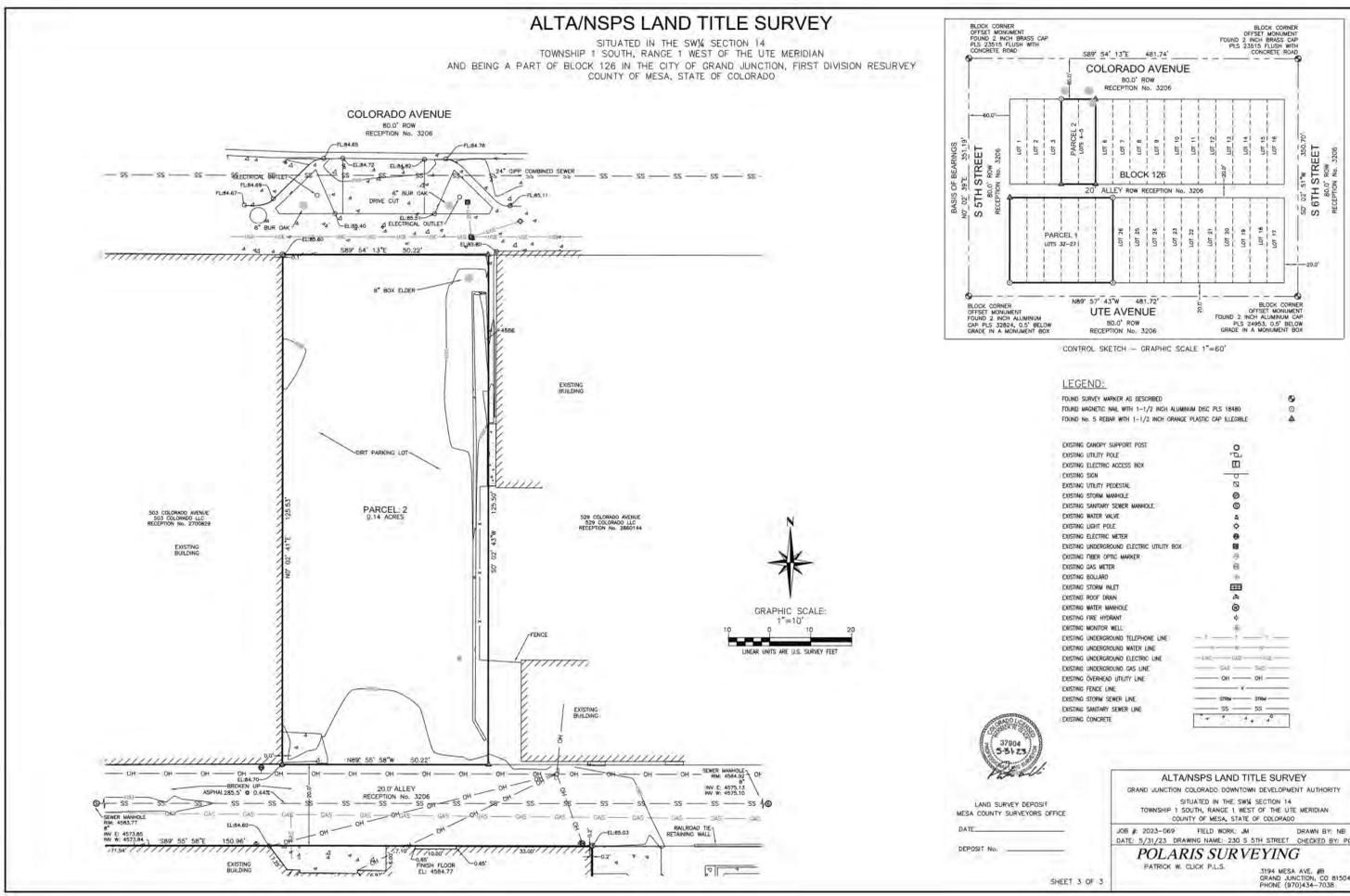
PROJECT TEAM

ARCHITECT OF RECORD CHAD HOLTZINGER SHOPWORKS ARCHITECTURE 301 W 45TH AVE DENVER, CO 80216 303.433.4094	CIVIL ENGINEER SCOTT SORENSEN AUSTIN CIVIL GROUP, INC 123 N STREET GRAND JUNCTION, CO (970) 242-7540	LANDSCAPE ARCHITECT CHRISTOPHER HOY FLOW DCIA 301 W 45TH AVE DENVER, CO 80216 NUMBER	STRUCTURAL ENGINEER DAVE KAST IMEG 1400 GLENARM PLACE, SUITE 101 DENVER, CO 80202 (303) 823-4927	MECHANICAL ENGINEER BRYAN MOEN MEC INC. 4840 N PECOS ST UNIT F DENVER, CO 80211 (303) 907-4285	ELECTRICAL ENGINEER KEVIN STAGEMAN MV CONSULTING, INC. 4840 PECOS ST, UNIT F DENVER, CO 80211 (303) 325-3271	PLUMBING ENGINEER BRYAN MOEN MEC INC. 4840 N PECOS ST UNIT F DENVER, CO 80211 (303) 907-4285	TELECOMMUNICATIONS KEVIN STAGEMAN MV CONSULTING, INC. 4840 PECOS ST, UNIT F DENVER, CO 80211 (303) 325-3271	GENERAL CONTRACTOR TODD SCHMITT SHAW CONSTRUCTION 780 HORIZON DRIVE, #201 GRAND JUNCTION, CO 81506 (970) 242-9236
---	--	--	--	--	--	--	---	---

REV:

DRAWN: JS
 REVIEWED: KM
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: Z3017
 FILE:
 SHEET TITLE:
COVER SHEET

SCALE: 3" = 1'-0"





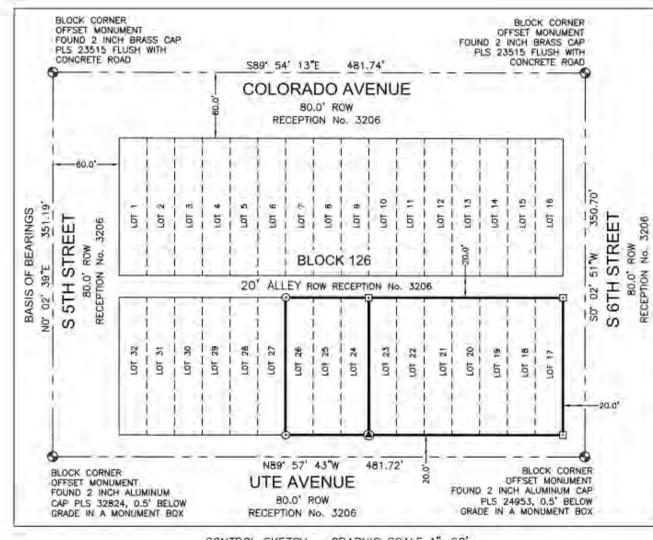
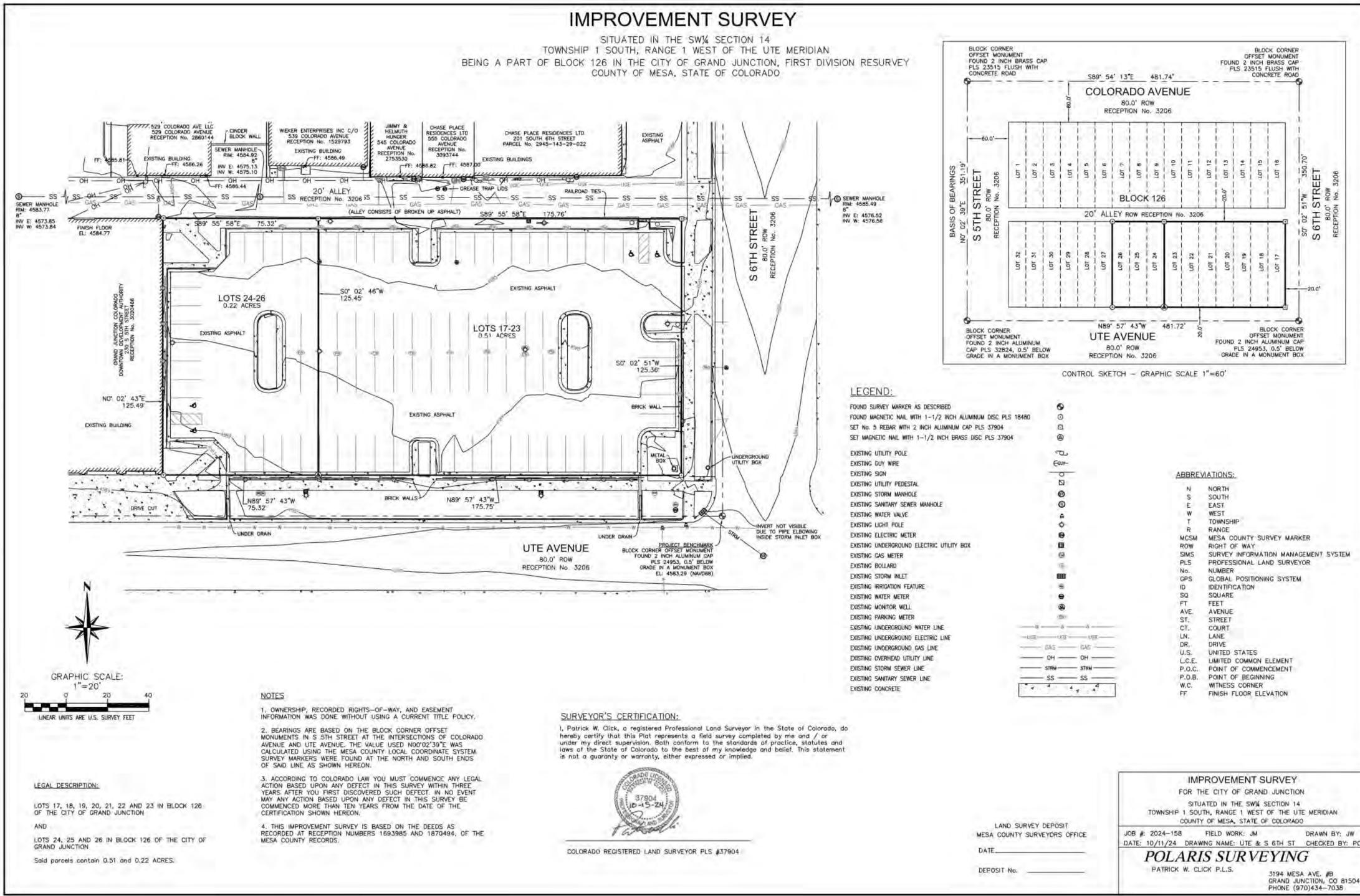
REV:

DRAWN: Author
REVIEWED: Approver
DATE: 01/30/26
PERMIT SET
PROJECT #: Z3017
FILE:
SHEET TITLE:
SURVEY

SCALE:

IMPROVEMENT SURVEY

SITUATED IN THE SW¹/₄ SECTION 14
TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN
BEING A PART OF BLOCK 126 IN THE CITY OF GRAND JUNCTION, FIRST DIVISION RESURVEY
COUNTY OF MESA, STATE OF COLORADO



LEGEND:

- FOUND SURVEY MARKER AS DESCRIBED
- FOUND MAGNETIC NAIL WITH 1-1/2 INCH ALUMINUM DISC PLS 18480
- SET NO. 5 REBAR WITH 2 INCH ALUMINUM CAP PLS 37904
- SET MAGNETIC NAIL WITH 1-1/2 INCH BRASS DISC PLS 37904
- EXISTING UTILITY POLE
- EXISTING GUY WIRE
- EXISTING SIGN
- EXISTING UTILITY PEDESTAL
- EXISTING STORM MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING WATER VALVE
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING UNDERGROUND ELECTRIC UTILITY BOX
- EXISTING GAS METER
- EXISTING BOLLARD
- EXISTING STORM INLET
- EXISTING IRRIGATION FEATURE
- EXISTING WATER METER
- EXISTING MONITOR WELL
- EXISTING PARKING METER
- EXISTING UNDERGROUND WATER LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING UNDERGROUND GAS LINE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING STORM SEWER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING CONCRETE

- ### ABBREVIATIONS:
- N NORTH
 - S SOUTH
 - E EAST
 - W WEST
 - T TOWNSHIP
 - R RANGE
 - MCSM MESA COUNTY SURVEY MARKER
 - ROW RIGHT OF WAY
 - SIMS SURVEY INFORMATION MANAGEMENT SYSTEM
 - PLS PROFESSIONAL LAND SURVEYOR
 - No. NUMBER
 - GPS GLOBAL POSITIONING SYSTEM
 - ID IDENTIFICATION
 - SQ SQUARE
 - FT FEET
 - AVE AVENUE
 - ST. STREET
 - CT. COURT
 - LN. LANE
 - DR. DRIVE
 - U.S. UNITED STATES
 - L.C.E. LIMITED COMMON ELEMENT
 - P.O.C. POINT OF COMMENCEMENT
 - P.D.B. POINT OF BEGINNING
 - W.C. WITNESS CORNER
 - FF FINISH FLOOR ELEVATION

NOTES

1. OWNERSHIP, RECORDED RIGHTS-OF-WAY, AND EASEMENT INFORMATION WAS DONE WITHOUT USING A CURRENT TITLE POLICY.
2. BEARINGS ARE BASED ON THE BLOCK CORNER OFFSET MONUMENTS IN S 5TH STREET AT THE INTERSECTIONS OF COLORADO AVENUE AND UTE AVENUE. THE VALUE USED N00°02'39"E WAS CALCULATED USING THE MESA COUNTY LOCAL COORDINATE SYSTEM SURVEY MARKERS WERE FOUND AT THE NORTH AND SOUTH ENDS OF SAID LINE AS SHOWN HEREON.
3. ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVERED SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
4. THIS IMPROVEMENT SURVEY IS BASED ON THE DEEDS AS RECORDED AT RECEPTION NUMBERS 169,9985 AND 1870494, OF THE MESA COUNTY RECORDS.

SURVEYOR'S CERTIFICATION:

I, Patrick W. Click, a registered Professional Land Surveyor in the State of Colorado, do hereby certify that this Plat represents a field survey completed by me and / or under my direct supervision. Both conform to the standards of practice, statutes and laws of the State of Colorado to the best of my knowledge and belief. This statement is not a guaranty or warranty, either expressed or implied.



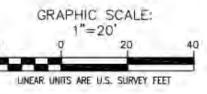
COLORADO REGISTERED LAND SURVEYOR PLS #37904

LAND SURVEY DEPOSIT
MESA COUNTY SURVEYORS OFFICE
DATE _____
DEPOSIT No. _____

IMPROVEMENT SURVEY
FOR THE CITY OF GRAND JUNCTION
SITUATED IN THE SW¹/₄ SECTION 14
TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN
COUNTY OF MESA, STATE OF COLORADO

JOB # 2024-158 FIELD WORK: JM DRAWN BY: JW
DATE: 10/11/24 DRAWING NAME: UTE & S 6TH ST CHECKED BY: PC

POLARIS SURVEYING
PATRICK W. CLICK P.L.S.
3194 MESA AVE, #B
GRAND JUNCTION, CO 81504
PHONE (970)434-7038



LEGAL DESCRIPTION:
LOTS 17, 18, 19, 20, 21, 22 AND 23 IN BLOCK 126 OF THE CITY OF GRAND JUNCTION
AND
LOTS 24, 25 AND 26 IN BLOCK 126 OF THE CITY OF GRAND JUNCTION
Said parcels contain 0.51 and 0.22 ACRES.

CONSTRUCTION PLAN SET – THE TERMINAL, DECEMBER 18, 2025, for accommodations reviewing this document please contact City of Grand Junction Development Department, 970-244-1430

HEADWATERS HOUSING PARTNERS
 119 South Spring Street, Suite 102
 Aspen, Colorado 81611
 (970) 274-0890

PLANS FOR
 CONSTRUCTION OF

THE TERMINAL

DECEMBER 18, 2025

CIVIL ENGINEER:
 Austin Civil Group, Inc.
 123 North 7th Street
 Suite 300
 Grand Junction, CO 81501
 (970) 242-7540

ARCHITECT:
 Shopworks Architecture
 301 West 45th Ave
 Denver, CO 80216
 (303) 433-4094

LAND SURVEYOR:
 Polaris Surveying, LLC
 3194 Mesa Ave B
 Grand Junction, Colorado 81504
 (970) 434-7038

LANDSCAPE ARCHITECT:
 Flow Design Collaborative
 301 West 45th Ave
 Denver, CO 80216
 (970) 214-4078

A • C • G
AUSTIN CIVIL GROUP, INC.
 Land Planning • Civil Engineering • Development Services
 123 North 7th Street, Suite 300 • Grand Junction, Colorado 81501
 (970) 242-7540



PROJECT
 LOCATION

VICINITY MAP
 NTS

NO.	TITLE
C.01	COVER
C.02	TYPICAL CONSTRUCTION NOTES
C.03	DEMOLITION PLAN
C.04	SITE PLAN
C.05	UTILITY COMPOSITE PLAN
C.06	STORM SEWER DETAIL
C.07	GREASE LINE DETAIL
C.08	SANITARY LINE DETAIL
C.09	HORIZONTAL CONTROL PLAN
C.10	GRADING AND DRAINAGE PLAN



ACCEPTANCE BLOCK
 THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
 CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

CITY DEVELOPMENT ENGINEER _____ DATE _____

REV:

 DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 FILE
 SHEET TITLE: COVER

SCALE: N/A

 NO. **C.01**

P:\1360\0002 - The Terminal\Drawings\C3D\Production Drawings\PROD SITE - Terminal RBA.dwg, 1/16/2026 2:01:51 PM, DWG To PDF.pc3

GENERAL CONSTRUCTION NOTES

- Contractor shall contact Mark Barslund, City of Grand Junction's development inspector, at (970) 201-1362, and Josh Martinez, Mesa County Stormwater, 970-683-4206, a minimum of 72 hours in advance, for a pre-construction meeting prior to beginning work.
- Locations of existing utilities shown on these plans are approximate only. Contractor is to contact affected utility for specific locations before digging.
- The Contractor shall notify the engineer if unanticipated conditions are encountered during completion of the work which require modifications to the contract drawings. The engineer can be reached at 970-242-7540.
- Contractor shall give 48-hour notice to all authorized inspectors, superintendents, or person in charge of public and private utilities affected by his operations prior commencement of work. Contractor shall assure himself that all construction permits are current.
- Contractor shall confine his construction operations to the right-of-way, easements, and lots, as shown on plans and plat. Any damage to private facilities outside these limits shall be repaired by the Contractor at no expense to the Owner.
- All construction, related work, materials, performance and quality of work provided shall conform to the requirements of the City of Grand Junction Standard Specifications and Drawings and the applicable sections of the most current edition of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction, Colorado Standard Plans, Division of Highways M & S Standards.
- Contractor shall familiarize himself with the geotechnical testing requirements of the City of Grand Junction. The results of the required types of tests and numbers of passing tests shall be furnished to the Engineer for verification before final acceptance by the Owner will be granted. All failing tests shall be brought to the immediate attention of the Engineer and retests shall be performed until passing results are obtained. All utility lines, including service lines falling shall be tested.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for utility trench back fill unless otherwise approved by the Engineer.
- All utility installations are to be performed in accordance with the City of Grand Junction Standard Specifications for the Construction of Underground Utilities and Standard Details.
- All sewer lines must be tested and approved PRIOR to street construction. Contractor is required to notify the Owner's representative PRIOR to testing. The Owner's representative must be present to witness testing of water and sewer lines or the City will not approve the installation.
- In the event of a discrepancy between the construction notes contained herein and the notes and details in the City of Grand Junction Standard Contract Documents for Capital Improvements Construction manual, the City's manual shall control.
- All work within the City of Grand Junction Right-of-Way shall require a "Work in the Right-of-Way" Permit. All construction work shall be in accordance with the latest edition of the City of Grand Junction Standard Specifications.
- All concrete to include a minimum of 6" (six) Class 6 ABC, unless otherwise noted.
- All fill, building, concrete or asphalt pavement areas shall be stripped of a minimum 6-inches of topsoil.
- Contractor shall provide as-built redline drawings for all utilities installed by the project, stamped with elevation & locations. All water, sewer, storm and irrigation lines shall be surveyed in three dimensions at each end & all angle points or connections

PAVING CONSTRUCTION NOTES

- All road widths and radii are to flow line unless noted otherwise. Any "spot" design elevations are to flow line of curb and gutter unless otherwise noted.
- Prior to pavement placement, the pavement prism should be stripped of all unsuitable materials. It is recommended that the subgrade soils be scarified to a depth of 12-inches, moisture conditioned, and recompacted to a minimum of 95% of the standard Proctor maximum dry density, within ±2% of optimum moisture as determined by AASHTO T-99.
- Contractor to protect existing utilities and appurtenances. Manholes, drainage inlets, utility lines, etc., damaged, covered, or filled with dirt or debris by the Contractor shall be cleaned and repaired at no expense to the Owner.
- Where proposed pavement is to match existing pavement, existing pavement is to be squared cut, full base thickness is to be brought to match line and existing surface is to be tack-coated before proposed surface is placed.
- All handicap ramps, sidewalks and curb and gutter are to be constructed where indicated on the plans and in accordance The City of Grand Junction requirements..
- Curb, gutter, and drainage pans are to have expansion joints at each change in horizontal alignment of curb and gutter, but in no case at a greater distance apart than 100 feet. Locate dummy grooved joints between expansion joints at intervals not exceeding 10 feet. Where length of pour precludes 10 foot intervals, the end sections may be less than 10 feet but not less than 5 feet.
- Concrete flatwork in drive areas shall be 6" Min Class P, with #4 Bar at 1'-4" on center, each way. Provide dowel bars into adjacent concrete pours and expansion joints next to foundations and other permanent structures. Concrete joints shall be placed at 8'-0" spaces max.
- Concrete flatwork for sidewalks not in the right of way within the project site shall be 4-inch min. class GV-B with 6x6x1.4X1.4 WWF.
- PAVEMENT SECTION: See Geotech Report/Table to the right.

ALTERNATIVE	HOT-MIX ASPHALT PAVEMENT	CDOT CLASS 6 BASE COURSE	CDOT CLASS 3 SUBBASE COURSE	CONCRETE PAVEMENT	TOTAL
PARKING AREAS					
A	3.0	10.0			13.0
B	4.0	7.0			11.0
C	3.0	6.0	6.0		15.0
RIGID PAVEMENT					
TRUCK TRAFFIC AREAS					
A	3.0	15.0			18.0
B	4.0	12.0			16.0
C	3.0	6.0	13.0		22.0
RIGID PAVEMENT					
		6.0		8.0	14.0

WATER LINE CONSTRUCTION

- All water lines shall be constructed in accordance with the City of Grand Junction Standards and Specifications.
- Contractor shall notify the City of Grand Junction 24 hours prior to the beginning of construction.
- All trenches shall be compacted to 95% within 2% of optimum moisture content, as determined by AASHTO T-99. Contractor shall be required to perform all necessary compaction tests through a certified soils lab.
- Minimum cover required over top of new waterlines is 4'-6".
- All water mains to be DR-18 PVC, Class 150 conforming to AWWA C-900.
- Cast Iron fittings to conform to AWWA C-110.
- Fire Hydrants shall conform to AWWA C-502, Mueller Super Centurian or Kennedy Guardian.
- All materials labor and equipment required for testing and dissection of water lines shall be furnished by Contractor. Disinfection of water lines shall conform to AWWA C-651-86 or latest revision thereof. No separate pay.
- All pipe bends/angle points, both horizontal and vertical, as called for on the plans are to be thrust blocked per the City of Grand Junction details and Technical Specifications.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for water line trench backfill unless otherwise approved by the Engineer.
- All City of Grand Junction Water Mains are to be bedded per City of Grand Junction Standards.
- All water service lines 2" and smaller shall be 200 psi rated "Pure Core" Blue HDPE, or approved equal.

STORM SEWER CONSTRUCTION NOTES

- All storm sewer line construction shall be in accordance with the City of Grand Junction Standards and Specifications.
- All Reinforced Concrete storm sewer pipe shall conform to ASTM Standard Specifications, C-76, Class III unless otherwise noted.
- All polyvinyl chloride (PVC) pipe and fittings shall conform to ASTM Standard Specifications, D3034 and F679, SDR-35 unless otherwise noted.
- All High Density Polyethylene (HDPE) pipe and fittings shall be smooth bore and shall conform to the following:
12 inch to 36 inch shall meet ASSHTO M294
42 inch to 48 inch shall meet ASSHTO M96
All HDPE pipe up to 30" shall be backfilled to springline with Class-6.

FUGITIVE DUST CONTROL PLAN

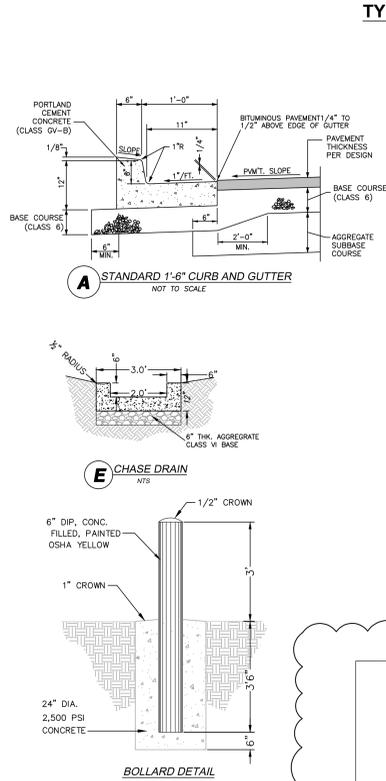
- Before stripping of the site preparation for overlot grading, the surface is to be pre-wet to control dust.
- Any stockpiles of stripping materials are to be periodically sprayed with water or a crusting agent to stabilize potentially wind blown material.
- Haul road both into and around the site are to be sprayed as needed to suppress dust.
- The Storm Water Management Plan and permit shall be obtained and kept onsite before starting any construction work. Gravel pads are to be constructed at the entrances to the site to help in removing mud from the wheels of haulage trucks before they enter onto City streets.
- Trucks hauling import fill are to be tarped to aid in the control of airborne dust.

UTILITIES AND AGENCIES			
CITY OF GRAND JUNCTION SANITARY SEWER	MARK BARSBLUND	970-201-1362	
CITY OF GRAND JUNCTION WATER	MARK BARSBLUND	970-201-1362	
GRAND VALLEY IRRIGATION COMPANY	PHIL BERTRAND	970-242-2762	
CITY OF GRAND JUNCTION PUBLIC WORKS	MARK BARSBLUND	970-201-1362	
XCEL ENERGY - GAS & ELECTRIC	MIKE EASTER	970-244-2680	
CENTURY LINK	CHRIS JOHNSON	970-244-4333	
CHARTER	JOHN VALDEZ	970-245-6750	
MESA COUNTY STORMWATER	JOSH MARTINEZ	970-683-4206	

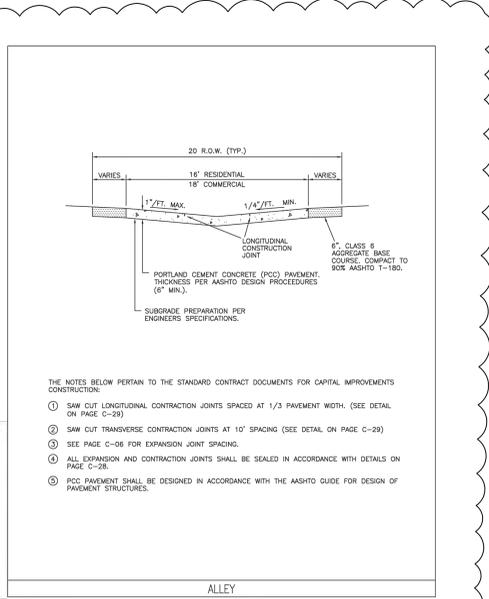
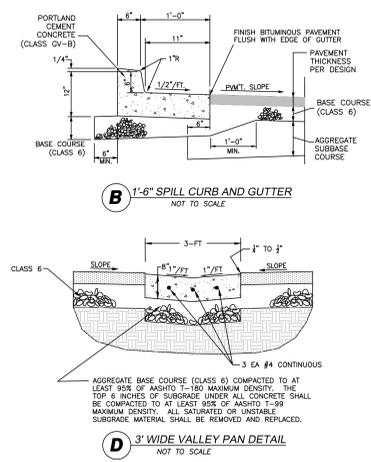
LEGEND	
--- PROPERTY LINE	⊙ EXISTING STORM SEWER MANHOLE
--- ADJACENT PROPERTY LINE	⊙ PROPOSED STORM SEWER MANHOLE
--- EXISTING EASEMENT	--- PROPOSED IN-LINE DRAIN
--- PROPOSED EASEMENT	--- EXISTING 8" WATER MAIN
--- EXISTING BUILDING	--- PROPOSED 2" DOMESTIC SERVICE
--- PROPOSED BUILDING	--- PROPOSED 4" FIRE LINE
--- EXISTING CURB/GUTTER	⊙ EXISTING FIRE HYDRANT
--- PROPOSED CURB/GUTTER	⊙ PROPOSED FIRE HYDRANT
--- PROPOSED SPILL CURB/GUTTER	⊙ EXISTING WATER METER
--- PROPOSED TRANSITION CURB/GUTTER	⊙ PROPOSED WATER METER
--- EXISTING RETAINING WALL	⊙ PROPOSED METER/BACKFLOW VAULT
--- EXISTING 1'-FT CONTOUR	⊙ PROPOSED IRRIGATION MANHOLE
--- EXISTING 5'-FT CONTOUR	--- PROPOSED FENCE
--- PROPOSED 1'-FT CONTOUR	--- EXISTING FENCE
--- PROPOSED 5'-FT CONTOUR	→ PROPOSED TRAFFIC FLOW
--- EXISTING GRAVEL	--- GRADE BREAK
--- PROPOSED GRAVEL	• ROOF DRAIN (RD)
--- EXISTING ASPHALT	☆ STREET LIGHT POLE
--- PROPOSED ASPHALT	▼ FIRE DEPARTMENT CONNECTION
--- PROPOSED HEAVY DUTY ASPHALT	⊙ PARKING LOT LIGHT
--- EXISTING CONCRETE	⊙ EXISTING CONCRETE
--- PROPOSED CONCRETE	⊙ POWER POLE
--- PROPOSED HEAVY DUTY CONCRETE	AS-BUILT
--- EXISTING SANITARY SEWER	FL FLOWLINE
⊙ PROPOSED SANITARY SEWER	EOB EDGE OF PAVEMENT
⊙ EXISTING SANITARY SEWER MANHOLE	TOC TOP OF CONCRETE
⊙ PROPOSED SANITARY SEWER MANHOLE	TOW TOP OF WALL
⊙ PROPOSED SANITARY SEWER CLEANOUT	BOB BOTTOM OF WALL
⊙ EXISTING STORM SEWER	TBW TOP BACK OF WALK
⊙ PROPOSED STORM SEWER	TC TOP OF CURB
⊙ EXISTING STORM SEWER INLET	BOC BACK OF CURB
⊙ PROPOSED STORM SEWER INLET	LA LANDSCAPE AREA
⊙ PROPOSED DRY UTILITIES	△ UTILITY PEDESTALS (TEL & ELEC)
--- HOL-HYDRAULIC GRADE LINE	⊠ TRANSFORMER

SANITARY SEWER CONSTRUCTION NOTES

- All materials and workmanship shall comply to the Standards and Specifications of the City of Grand Junction. The City of Grand Junction reserves the right to accept or reject any materials and or workmanship that does not conform.
- The Contractor shall have one signed copy of plans and a copy of the City of Grand Junction Standards and Specifications at the job site at all times.
- All sanitary sewer pipe shall be PVC SDR-35 (ASTM 3034) unless otherwise specified.
- All sewer lines to be laid to grade utilizing a "pipe laser".
- All connections to the new sewer lines shall be accomplished with full body wyes or tees. Tapping saddles will not be allowed, except as noted.
- All trenches shall be compacted to 95% within 2% of optimum moisture content, as determined AASHTO T-99.
- A minimum of 10 ft. of separation shall be maintained at all times between the waterline and sewer line except at specified crossings.
- The contractor is responsible for all required sewer line testing to be completed in accordance with the City of Grand Junction Standards and Specifications. Final testing to be accomplished only after all other infrastructure has been installed. This includes waterlines, gas lines, electric lines, etc. Testing will be performed after all compaction of street subgrade and prior to street paving. Final lamping will also be accomplished after paving is completed to insure that the line is clean. These tests will be the basis for issuing the initial acceptance of the sewer line extension.
- Manholes shall be constructed as shown on the City of Grand Junction Standard Sanitary Sewer Detail sheets SS-02 of SS-03 as appropriate.
- Water stop gaskets and clamp assemblies are to be furnished and installed at all connections to manholes. No separate pay.
- Metal grade rings are NOT to be used on top of manhole rings to adjust to finish pavement elevations. All adjustments to finish grade on new manholes shall be made using concrete grade rings and gROUT as shown on the standard details.
- Where sanitary sewers cross under a water line with less than 18 inches of vertical separation, and in all cases where the sanitary sewer crosses over the waterline at any depth, provide total concrete encasement of pipe for a length of 10 feet to either side of the waterline.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for sewer line trench backfill unless otherwise approved by the Engineer.
- To inhibit the movement of ground water through sewer bedding and haunching material, clay cutoff wall of native material are to be constructed approximately 10 feet upstream from each manhole and shown on sanitary sewer plan and profiles.
- Notify the City of Grand Junction 48 hours prior to the construction of the sanitary sewer facilities.
- The contractor shall obtain a City of Grand Junction Street Cut Permit for all work within existing City right-of-way prior to construction.



TYPICAL CONCRETE SECTIONS



- THE NOTES BELOW PERTAIN TO THE STANDARD CONTRACT DOCUMENTS FOR CAPITAL IMPROVEMENTS CONSTRUCTION:
- SAW CUT LONGITUDINAL CONTRACTION JOINTS SPACED AT 1/3 PAVEMENT WIDTH. (SEE DETAIL ON PAGE C-28)
 - SAW CUT TRANSVERSE CONTRACTION JOINTS AT 10' SPACING (SEE DETAIL ON PAGE C-28)
 - SEE PAGE C-06 FOR EXPANSION JOINT SPACING.
 - ALL EXPANSION AND CONTRACTION JOINTS SHALL BE SEALED IN ACCORDANCE WITH DETAILS ON PAGE C-28.
 - POC PAVEMENT SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES.



ACCEPTANCE BOOK
THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS SERIES TO THE PUBLIC. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY RESERVES ACCEPTANCE AS AGENCY AND LIABILITY FOR REVIEW OF PROVISIONS. REVIEWER'S SIGNATURE OR CALCULATOR SIGNATURE SHALL BE THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

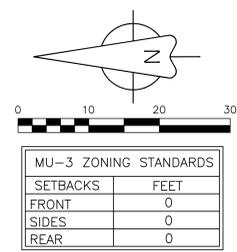
AUSTIN CIVIL GROUP, INC.
 Land Planning • Civil Engineering • Development Services
 122 North 7th Street, Suite 300 • Grand Junction, Colorado 81501
 (970) 242-7540
ARCHITECTURE
SNOP
 301 W. 45TH AVE • DENVER, CO 80216 • 303.433.4094

DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 FILE:
 SHEET TITLE: GENERAL CONSTRUCTION NOTES

SCALE: N/A
 NO. **C.02**



VICINITY MAP
NOT TO SCALE



MU-3 ZONING STANDARDS	
SETBACKS	FEET
FRONT	0
SIDES	0
REAR	0

UTILITIES AND AGENCIES		
CITY OF GRAND JUNCTION SANITARY SEWER	MARK BARSBLUND	970-201-1362
CITY OF GRAND JUNCTION WATER	MARK BARSBLUND	970-201-1362
GRAND VALLEY IRRIGATION COMPANY	PHIL BEFRAND	970-242-2762
CITY OF GRAND JUNCTION PUBLIC WORKS	MARK BARSBLUND	970-201-1362
AXEL ENERGY - GAS & ELECTRIC	MIKE EASTER	970-244-2660
CENTURY LINK	CHRIS JOHNSON	970-244-4333
CHARTER	JOHN VALDEZ	970-245-8750
MESA COUNTY STORMWATER	JOSH MARTINEZ	970-683-4206

LAND USE SUMMARY (TERMINAL LOTS)		
USE	SF	PERCENT
BUILDINGS	16,884	49%
LANDSCAPE	1,290	3.5%
ASPHALT/PKG/CONC	16,490	47.5%
ROW DEDICATION	0	0%
TOTAL	34,664	100%

BUILDING SUMMARY	
USE	SF
RETAIL (FOOD AND BEVERAGE)	4,205
GALLERY	5,564
APARTMENTS (107 TOTAL UNITS)	xx,xxx
TOTAL	xx,xxx

PARKING CALCULATION		
STUDIO: 20	REQUIREMENT PER STUDIO / BR	STUDIO: 20 x 1 = 20
1 BEDROOM: 58	= 1 PARKING SPACE	1 BEDROOM: 58 x 1 = 58
2 BEDROOM: 29	= 1.5 PARKING LOT	2 BEDROOM: 29 x 1.5 = 44
TOTAL = 107 UNITS		TOTAL PARKING SPACES = 122

ADDITIONAL PARKING REDUCTION	
BUS STOP WITHIN 1/4 MILE OF PROJECT	-5%
ADA	-5%
BIKE PARKING MIN. 5 BICYCLE SPACES	-5%
TOTAL	-15%

LEGEND	
[Symbol]	PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING EASEMENT
[Symbol]	PROPOSED EASEMENT
[Symbol]	EXISTING BUILDING
[Symbol]	PROPOSED BUILDING
[Symbol]	EXISTING CURB/GUTTER
[Symbol]	PROPOSED CURB/GUTTER
[Symbol]	PROPOSED SPILL CURB/GUTTER
[Symbol]	PROPOSED TRANSITION CURB/GUTTER
[Symbol]	EXISTING RETAINING WALL
[Symbol]	EXISTING 1'-FT CONTOUR
[Symbol]	EXISTING 5'-FT CONTOUR
[Symbol]	PROPOSED 1'-FT CONTOUR
[Symbol]	PROPOSED 5'-FT CONTOUR
[Symbol]	EXISTING ASPHALT
[Symbol]	PROPOSED ASPHALT
[Symbol]	PROPOSED DEMO
[Symbol]	PROPOSED LANDSCAPE
[Symbol]	EXISTING CONCRETE
[Symbol]	PROPOSED CONCRETE
[Symbol]	PROPOSED PATTERNED CONC.
[Symbol]	EXISTING SANITARY SEWER
[Symbol]	PROPOSED SANITARY SEWER
[Symbol]	EXISTING SANITARY SEWER MANHOLE
[Symbol]	PROPOSED SANITARY SEWER MANHOLE
[Symbol]	PROPOSED SAN. SEWER CLEANOUT
[Symbol]	EXISTING STORM SEWER
[Symbol]	PROPOSED STORM SEWER
[Symbol]	EXISTING STORM SEWER INLET
[Symbol]	PROPOSED STORM SEWER INLET
[Symbol]	EXISTING STORM SEWER MANHOLE
[Symbol]	PROPOSED STORM SEWER MANHOLE
[Symbol]	PROPOSED INLINE DRAIN
[Symbol]	EXISTING 8" WATER MAIN
[Symbol]	PROPOSED 2" DOMESTIC SERVICE
[Symbol]	PROPOSED FIRE LINE
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	PROPOSED FIRE HYDRANT
[Symbol]	EXISTING WATER METER
[Symbol]	PROPOSED WATER METER
[Symbol]	PROPOSED METER/BACKFLOW VAULT
[Symbol]	PROPOSED IRRIGATION MANHOLE
[Symbol]	PROPOSED FENCE
[Symbol]	EXISTING FENCE
[Symbol]	PROPOSED TRAFFIC FLOW
[Symbol]	GRADE BREAK
[Symbol]	ROOF DRAIN (RD)
[Symbol]	STREET LIGHT POLE
[Symbol]	FIRE DEPARTMENT CONNECTION
[Symbol]	PARKING LOT LIGHT
[Symbol]	PROPOSED BUILDING LIGHT
[Symbol]	POWER POLE
[Symbol]	FLOWLINE
[Symbol]	EOP OF PAVEMENT
[Symbol]	TOP OF CONCRETE
[Symbol]	FIRE DEPARTMENT CONNECTION
[Symbol]	BLDG BUILDING
[Symbol]	PL PROPERTY LINE
[Symbol]	TC TOP OF CURB
[Symbol]	BOC BACK OF CURB
[Symbol]	LF LINEAR FEET
[Symbol]	UTILITY PEDESTALS
[Symbol]	BENCHMARK

ACCEPTANCE BLOCK
THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

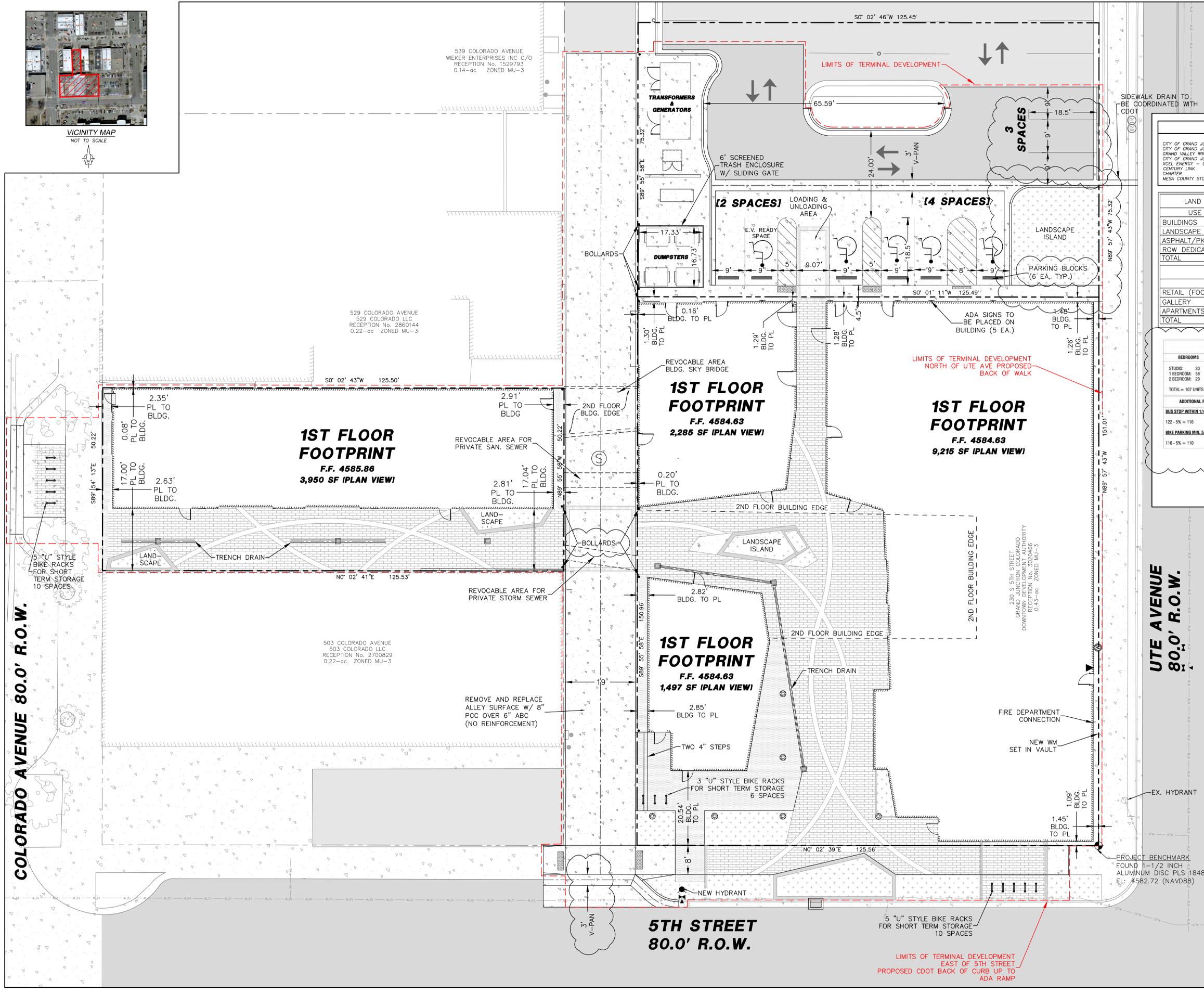
A.C.G. ARCHITECTURE
 AUSTIN CIVIL GROUP, INC.
 Land Planning • Civil Engineering • Development Services
 128 North 7th Street, Suite 300 • Grand Junction, Colorado 81501
 (970) 242-7540



DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 SHEET TITLE: CIVIL SITE PLAN

SCALE: 1" = 10'

NO. C.04



COLORADO AVENUE 80.0' R.O.W.

UTE AVENUE 80.0' R.O.W.

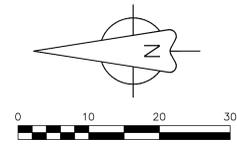
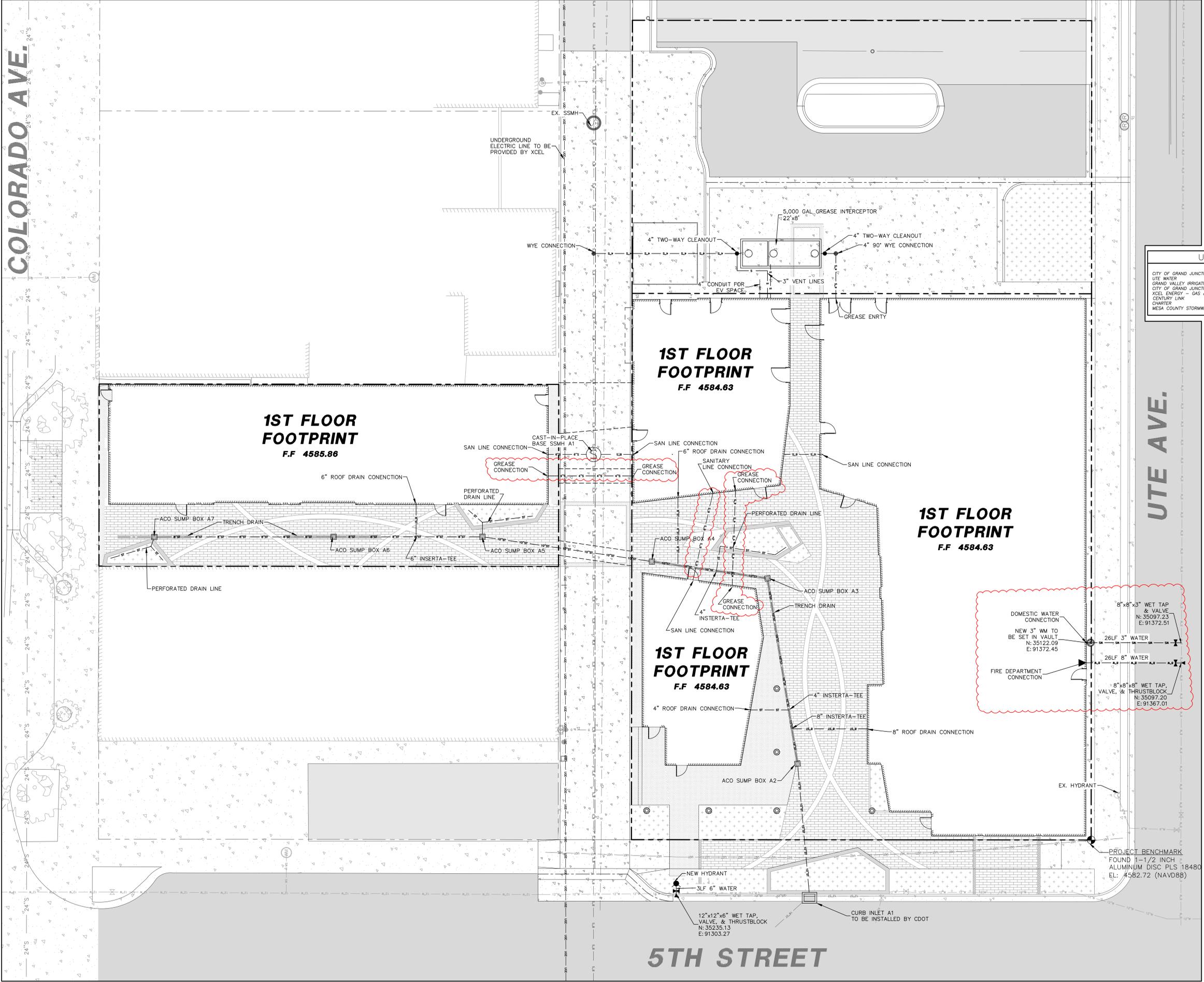
5TH STREET 80.0' R.O.W.

1ST FLOOR FOOTPRINT
F.F. 4585.86
3,950 SF IPLAN VIEW!

1ST FLOOR FOOTPRINT
F.F. 4584.63
2,285 SF IPLAN VIEW!

1ST FLOOR FOOTPRINT
F.F. 4584.63
9,215 SF IPLAN VIEW!

1ST FLOOR FOOTPRINT
F.F. 4584.63
1,497 SF IPLAN VIEW!



VICINITY MAP
NOT TO SCALE

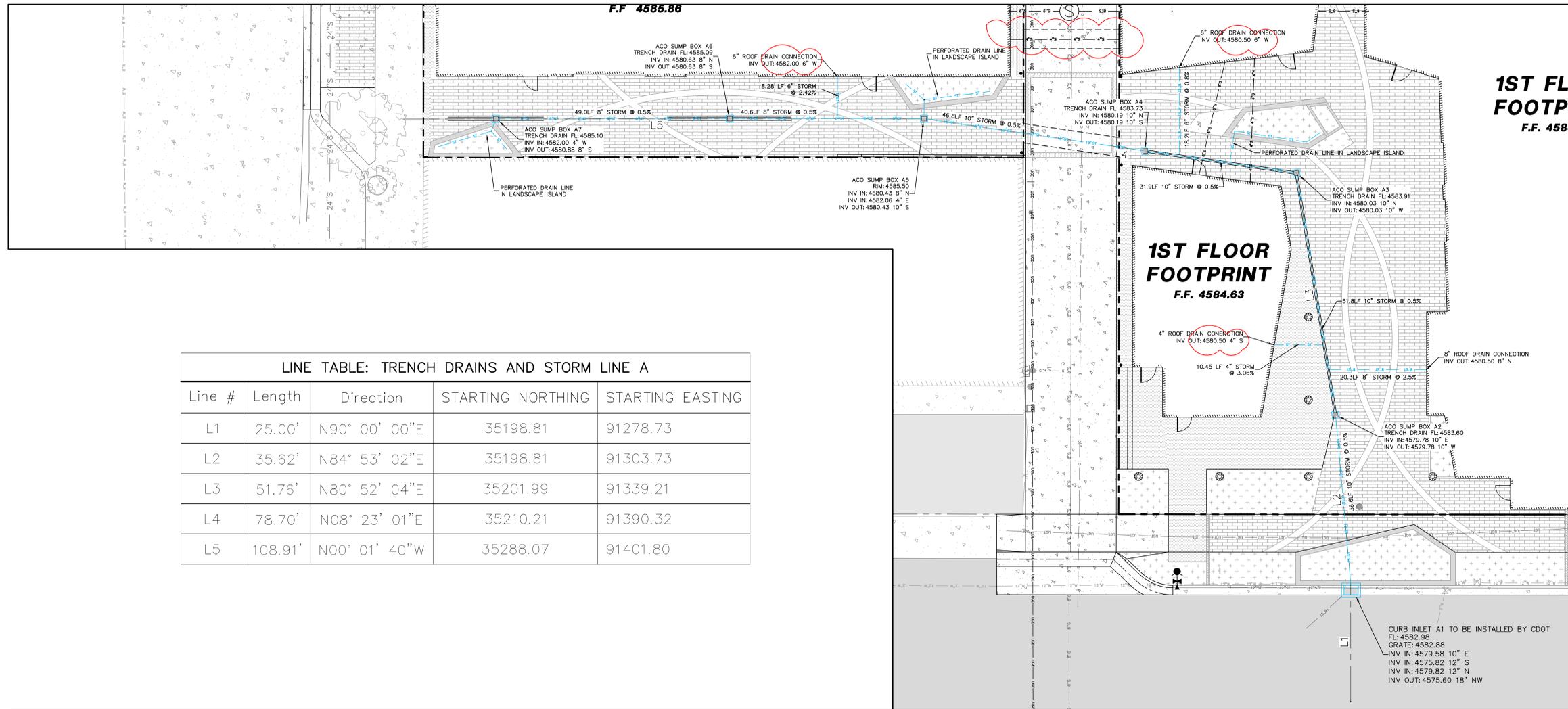
UTILITIES AND AGENCIES

CITY OF GRAND JUNCTION SANITARY SEWER	MARK BARSLUND	201-1362
UTE WATER	JIM DAUGHERTY	242-7491
GRAND VALLEY IRRIGATION	CHARLIE GUNTER	242-2762
CITY OF GRAND JUNCTION PUBLIC WORKS	MARK BARSLUND	201-1362
XCEL ENERGY - GAS & ELECTRIC	MIKE CASTRO	266-6804
CENTURY LINK	CHRIS JOHNSON	244-4333
CHARTER	JOHN VALDEZ	245-8750
MESA COUNTY STORMWATER	JOSH MARTINEZ	683-4206

LEGEND

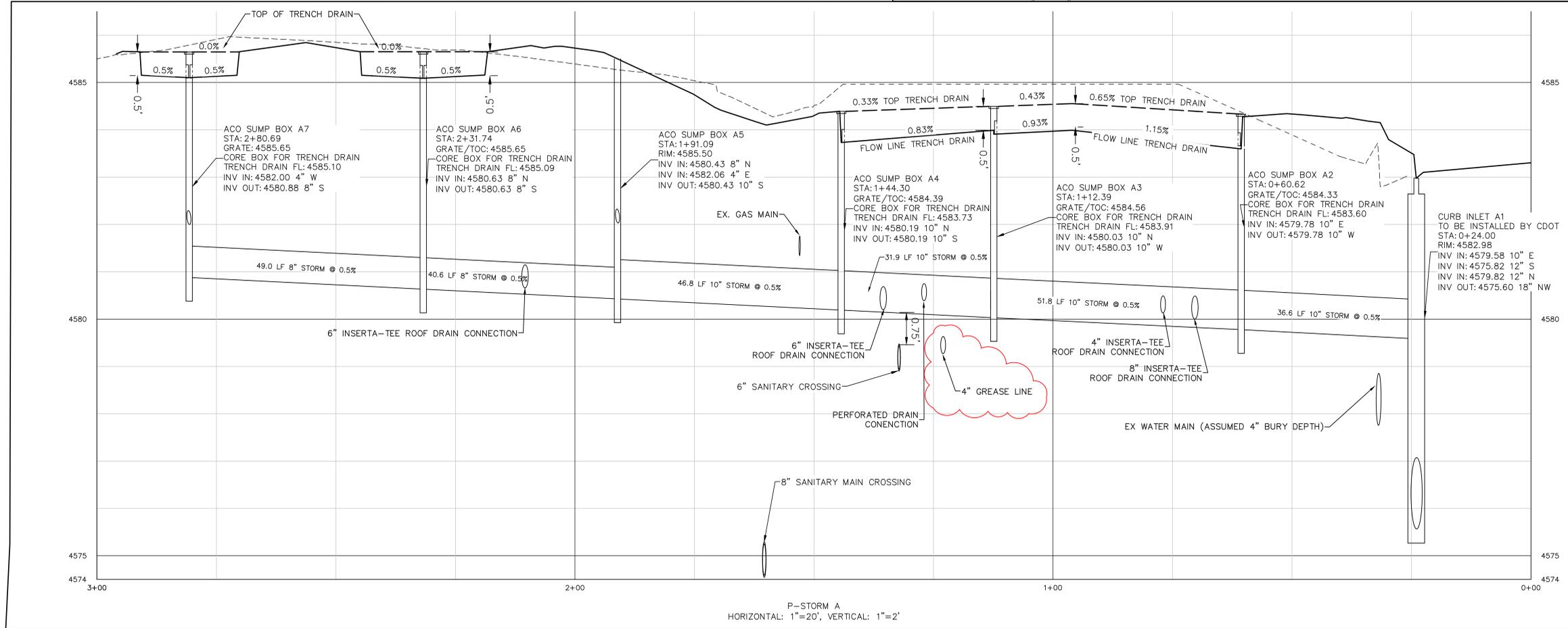
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING BUILDING
- PROPOSED BUILDING
- EXISTING CURB/GUTTER
- PROPOSED CURB/GUTTER
- PROPOSED SPILL CURB/GUTTER
- PROPOSED TRANSITION CURB/GUTTER
- EXISTING RETAINING WALL
- EXISTING 1'-FT CONTOUR
- EXISTING 5'-FT CONTOUR
- PROPOSED 1'-FT CONTOUR
- PROPOSED 5'-FT CONTOUR
- EXISTING ASPHALT
- PROPOSED ASPHALT
- PROPOSED DEMO
- PROPOSED LANDSCAPE
- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SAN. SEWER CLEANOUT
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER INLET
- PROPOSED STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- PROPOSED INLINE DRAIN
- EXISTING 8" WATER MAIN
- PROPOSED 2" DOMESTIC SERVICE
- PROPOSED FIRE LINE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING WATER METER
- PROPOSED WATER METER
- PROPOSED METER/BACKFLOW VAULT
- PROPOSED IRRIGATION MANHOLE
- PROPOSED FENCE
- EXISTING FENCE
- PROPOSED TRAFFIC FLOW
- GRADE BREAK
- ROOF DRAIN (RD)
- STREET LIGHT POLE
- FIRE DEPARTMENT CONNECTION
- PARKING LOT LIGHT
- PROPOSED BUILDING LIGHT
- POWER POLE
- FLOWLINE
- EOP
- PAVEMENT
- TOC
- TOP OF CONCRETE
- FDC
- FIRE DEPARTMENT CONNECTION
- BLDG
- PL
- PROPERTY LINE
- TC
- TOP OF CURB
- BOC
- BACK OF CURB
- LF
- LINEAR FEET
- UTILITY PEDESTALS
- BENCHMARK

ACCEPTANCE BLOCK
 THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
 CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.



LINE TABLE: TRENCH DRAINS AND STORM LINE A

Line #	Length	Direction	STARTING NORTHING	STARTING EASTING
L1	25.00'	N90° 00' 00"E	35198.81	91278.73
L2	35.62'	N84° 53' 02"E	35198.81	91303.73
L3	51.76'	N80° 52' 04"E	35201.99	91339.21
L4	78.70'	N08° 23' 01"E	35210.21	91390.32
L5	108.91'	N00° 01' 40"W	35288.07	91401.80



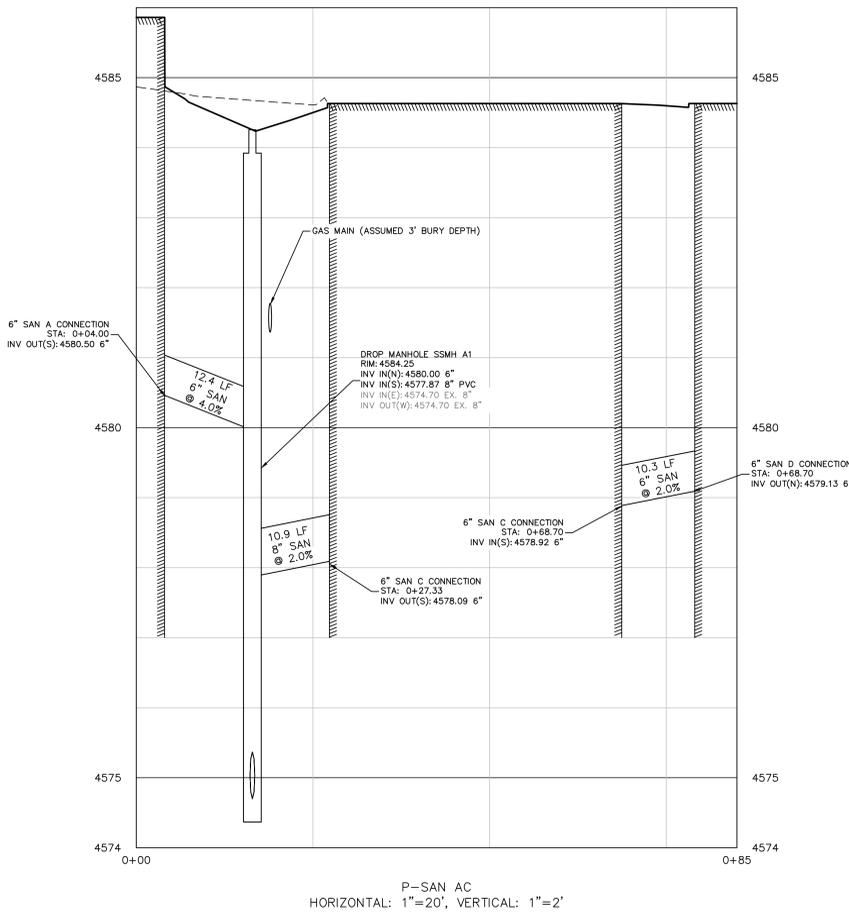
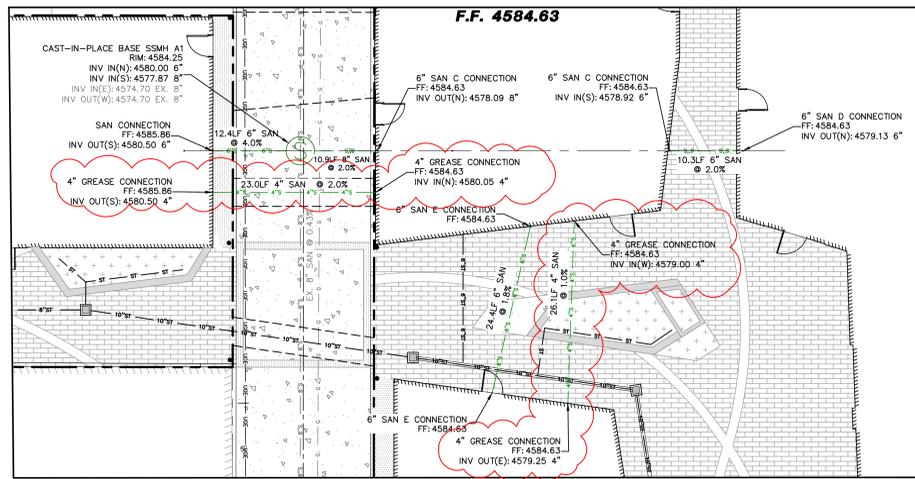
- LEGEND**
- PROPERTY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING EASEMENT
 - PROPOSED EASEMENT
 - EXISTING BUILDING
 - EXISTING CURB/GUTTER
 - PROPOSED CURB/GUTTER
 - PROPOSED SPILL CURB/GUTTER
 - PROPOSED TRANSITION CURB/GUTTER
 - EXISTING RETAINING WALL
 - EXISTING 1'-FT CONTOUR
 - EXISTING 5'-FT CONTOUR
 - PROPOSED 1'-FT CONTOUR
 - PROPOSED 5'-FT CONTOUR
 - EXISTING ASPHALT
 - PROPOSED ASPHALT
 - PROPOSED DEMO
 - PROPOSED LANDSCAPE
 - EXISTING CONCRETE
 - PROPOSED CONCRETE
 - PROPOSED PATTERNED CONC.
 - EXISTING SANITARY SEWER
 - PROPOSED SANITARY SEWER
 - EXISTING SANITARY SEWER MANHOLE
 - PROPOSED SANITARY SEWER MANHOLE
 - PROPOSED SAN. SEWER CLEANOUT
 - EXISTING STORM SEWER
 - PROPOSED STORM SEWER
 - EXISTING STORM SEWER INLET
 - PROPOSED STORM SEWER INLET
 - EXISTING STORM SEWER MANHOLE
 - PROPOSED STORM SEWER MANHOLE
 - PROPOSED INLINE DRAIN
 - EXISTING 8" WATER MAIN
 - PROPOSED 2" DOMESTIC SERVICE
 - PROPOSED FIRE LINE
 - EXISTING FIRE HYDRANT
 - PROPOSED FIRE HYDRANT
 - EXISTING WATER METER
 - PROPOSED WATER METER
 - PROPOSED METER/BACKFLOW VAULT
 - PROPOSED IRRIGATION MANHOLE
 - PROPOSED FENCE
 - EXISTING FENCE
 - PROPOSED TRAFFIC FLOW
 - GRADE BREAK
 - ROOF DRAIN (RD)
 - STREET LIGHT POLE
 - FIRE DEPARTMENT CONNECTION
 - PARKING LOT LIGHT
 - PROPOSED BUILDING LIGHT
 - POWER POLE
 - FLOWLINE
 - EOP
 - EDGE OF PAVEMENT
 - TOC
 - TOP OF CONCRETE
 - FDC
 - FIRE DEPARTMENT CONNECTION
 - BLDG
 - BUILDING
 - PL
 - PROPERTY LINE
 - TC
 - TOP OF CURB
 - BOC
 - BACK OF CURB
 - LF
 - LINEAR FEET
 - UTILITY PEDESTALS
 - BENCHMARK

A.C.G.
AUSTIN CIVIL GROUP, INC.
 Land Planning • Civil Engineering • Development Services
 122 North 7th Street, Suite 300 • Grand Junction, Colorado 81501
 970.242.7690



DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 FILE SHEET TITLE: STORM DETAIL
 SCALE: 1" = 10'
C.06

P:\1360\0002 - The Terminal\Drawings\CAD Production Drawings\PROCD SITE - Terminal RBA.dwg, 1/16/2026 1:48:22 PM, DWG To PDF.pc3



LEGEND	
---	PROPERTY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING EASEMENT
---	PROPOSED EASEMENT
---	EXISTING BUILDING
---	PROPOSED BUILDING
---	EXISTING CURB/GUTTER
---	PROPOSED CURB/GUTTER
---	PROPOSED SPILL CURB/GUTTER
---	PROPOSED TRANSITION CURB/GUTTER
---	EXISTING RETAINING WALL
---	EXISTING 1'-FT CONTOUR
---	EXISTING 5'-FT CONTOUR
---	PROPOSED 1'-FT CONTOUR
---	PROPOSED 5'-FT CONTOUR
---	EXISTING ASPHALT
---	PROPOSED ASPHALT
---	PROPOSED DEMO
---	PROPOSED LANDSCAPE
---	EXISTING CONCRETE
---	PROPOSED CONCRETE
---	PROPOSED PATTERNED CONC.
---	EXISTING SANITARY SEWER
---	PROPOSED SANITARY SEWER
---	EXISTING SANITARY SEWER MANHOLE
---	PROPOSED SANITARY SEWER MANHOLE
---	PROPOSED SAN. SEWER CLEANOUT
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	EXISTING STORM SEWER INLET
---	PROPOSED STORM SEWER INLET
---	EXISTING STORM SEWER MANHOLE
---	PROPOSED STORM SEWER MANHOLE
---	PROPOSED INLINE DRAIN
---	EXISTING 8" WATER MAIN
---	PROPOSED 2" DOMESTIC SERVICE
---	PROPOSED FIRE LINE
---	EXISTING FIRE HYDRANT
---	PROPOSED FIRE HYDRANT
---	EXISTING WATER METER
---	PROPOSED WATER METER
---	PROPOSED METER/BACKFLOW VAULT
---	PROPOSED IRRIGATION MANHOLE
---	PROPOSED FENCE
---	EXISTING FENCE
---	PROPOSED TRAFFIC FLOW
---	GRADE BREAK
---	ROOF DRAIN (RD)
---	STREET LIGHT POLE
---	FIRE DEPARTMENT CONNECTION
---	PARKING LOT LIGHT
---	PROPOSED BUILDING LIGHT
---	POWER POLE
---	FLOWLINE
---	EOP
---	EDGE OF PAVEMENT
---	TOC
---	TOP OF CONCRETE
---	FDC
---	FIRE DEPARTMENT CONNECTION
---	BUILDING
---	PROPERTY LINE
---	PL
---	TC
---	TOP OF CURB
---	BOC
---	BACK OF CURB
---	LF
---	LINEAR FEET
---	UTILITY PEDESTALS
---	BENCHMARK

A.C.G.
AUSTIN CIVIL GROUP, INC.
 Land Planning • Civil Engineering • Development Services
 123 North 10th Street, Suite 300 • Grand Junction, Colorado 81501
 (970) 242-7598

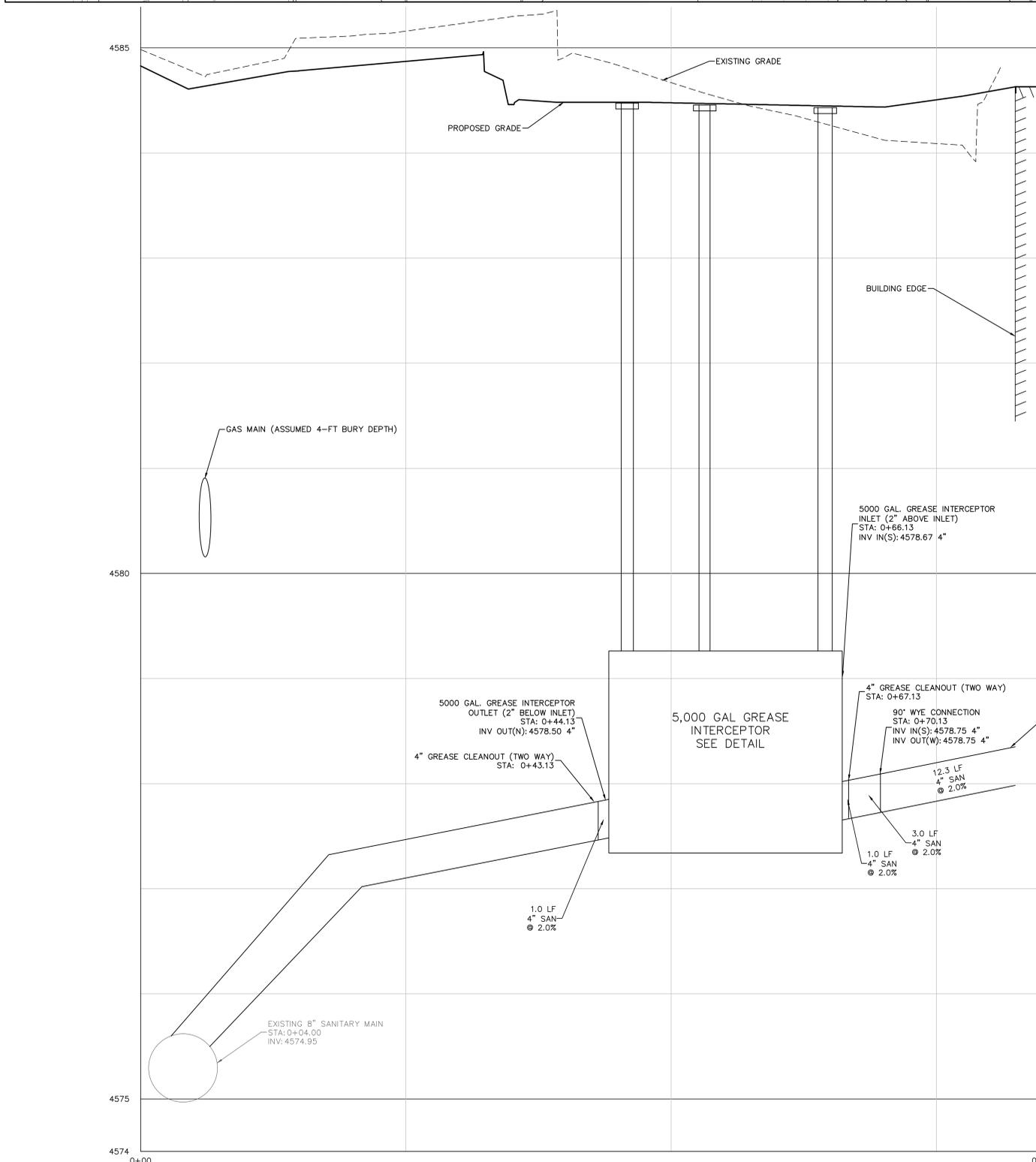
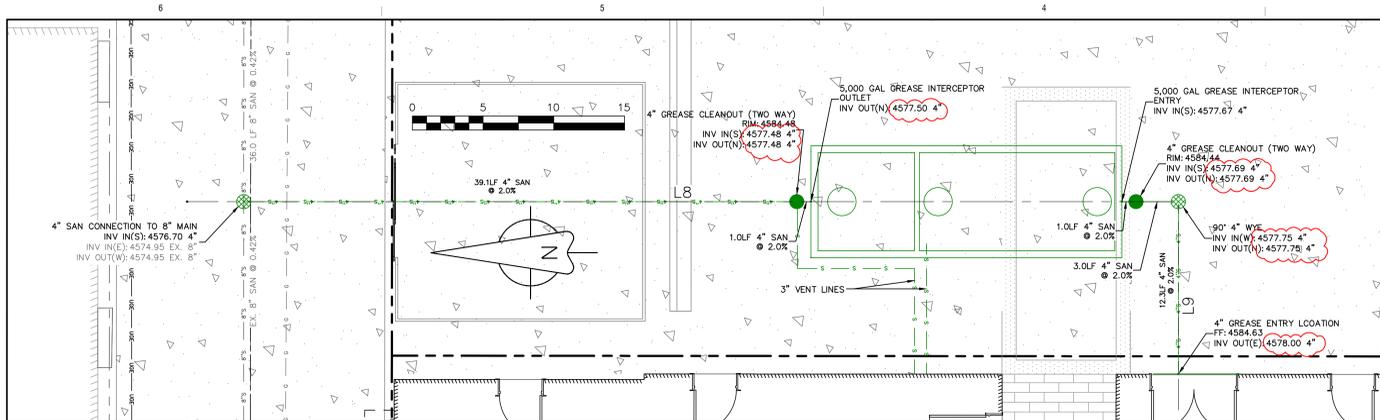


DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 SHEET TITLE: SANITARY
 DETAIL

ACCEPTANCE BLOCK
 THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
 CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

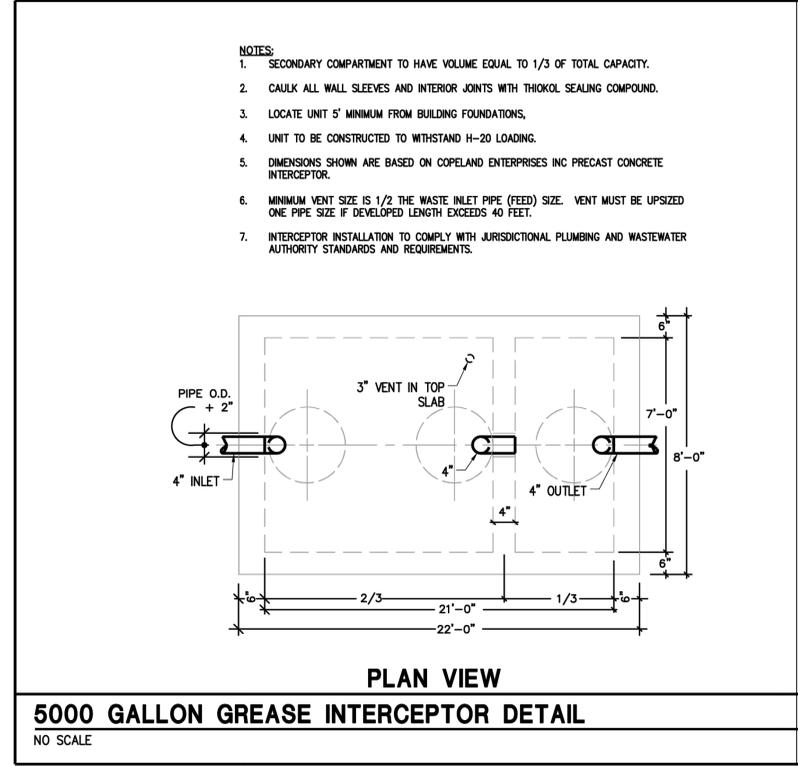
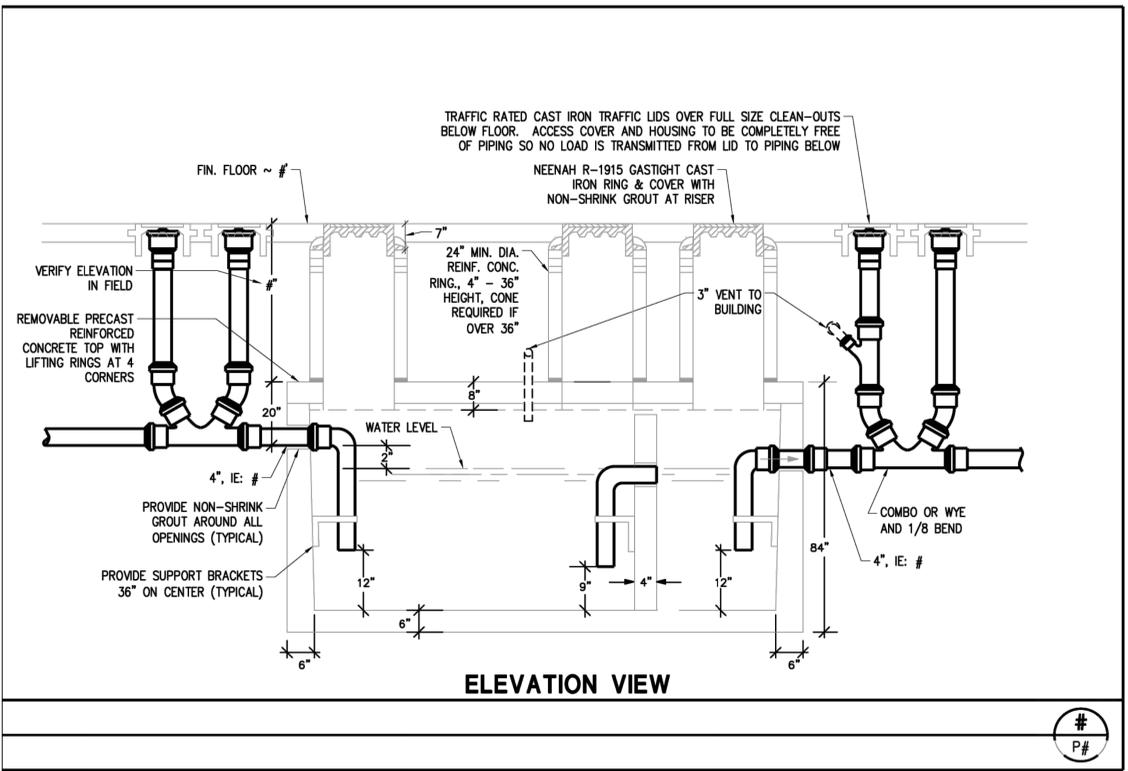
CITY DEVELOPMENT ENGINEER _____ DATE _____
 CITY PLANNER _____ DATE _____

SCALE: 1" = 10'
 NO. **C.07**



P-SAN B
HORIZONTAL: 1"=20', VERTICAL: 1"=2'

LINE TABLE: SAN LINE A				
Line #	Length	Direction	STARTING NORTHING	STARTING EASTING
L8	70.13'	S00° 00' 00"E	35261.67	91479.92
L9	14.87'	N90° 00' 00"W	35191.54	91479.92



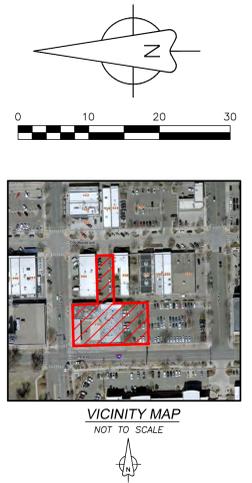
LEGEND	
---	PROPERTY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING EASEMENT
---	PROPOSED EASEMENT
---	EXISTING BUILDING
---	PROPOSED BUILDING
---	EXISTING CURB/GUTTER
---	PROPOSED CURB/GUTTER
---	EXISTING SPILL CURB/GUTTER
---	PROPOSED SPILL CURB/GUTTER
---	EXISTING TRANSITION CURB/GUTTER
---	PROPOSED TRANSITION CURB/GUTTER
---	EXISTING RETAINING WALL
---	PROPOSED 1-FT CONTOUR
---	EXISTING 5-FT CONTOUR
---	PROPOSED 1-FT CONTOUR
---	PROPOSED 5-FT CONTOUR
---	EXISTING ASPHALT
---	PROPOSED ASPHALT
---	EXISTING DEMO
---	PROPOSED LANDSCAPE
---	EXISTING CONCRETE
---	PROPOSED CONCRETE
---	PROPOSED PATTERNED CONC.
---	EXISTING SANITARY SEWER
---	PROPOSED SANITARY SEWER
---	EXISTING SANITARY SEWER MANHOLE
---	PROPOSED SANITARY SEWER MANHOLE
---	EXISTING SAN. SEWER CLEANOUT
---	PROPOSED SAN. SEWER CLEANOUT
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	EXISTING STORM SEWER INLET
---	PROPOSED STORM SEWER INLET
---	EXISTING STORM SEWER MANHOLE
---	PROPOSED STORM SEWER MANHOLE
---	EXISTING INLINE DRAIN
---	PROPOSED INLINE DRAIN
---	EXISTING 8" WATER MAIN
---	PROPOSED 2" DOMESTIC SERVICE
---	EXISTING FIRE LINE
---	PROPOSED FIRE HYDRANT
---	EXISTING FIRE HYDRANT
---	EXISTING WATER METER
---	PROPOSED WATER METER
---	PROPOSED METER/BACKFLOW VAULT
---	PROPOSED IRRIGATION MANHOLE
---	PROPOSED FENCE
---	EXISTING FENCE
---	PROPOSED TRAFFIC FLOW
---	GRADE BREAK
---	ROOF DRAIN (RD)
---	STREET LIGHT POLE
---	FIRE DEPARTMENT CONNECTION
---	PARKING LOT LIGHT
---	PROPOSED BUILDING LIGHT
---	POWER POLE
---	FLOWLINE
---	EOP
---	TOC
---	FDC
---	BUILDING
---	BLDG
---	PL
---	TC
---	BOC
---	LF
---	UTILITY PEDESTALS
---	BENCHMARK

- NOTES:
- SECONDARY COMPARTMENT TO HAVE VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY.
 - CAULK ALL WALL SLEEVES AND INTERIOR JOINTS WITH THIKOL SEALING COMPOUND.
 - LOCATE UNIT 5' MINIMUM FROM BUILDING FOUNDATIONS.
 - UNIT TO BE CONSTRUCTED TO WITHSTAND H-20 LOADING.
 - DIMENSIONS SHOWN ARE BASED ON COPELAND ENTERPRISES INC PRECAST CONCRETE INTERCEPTOR.
 - MINIMUM VENT SIZE IS 1/2 THE WASTE INLET PIPE (FEED) SIZE. VENT MUST BE UPSIZED ONE PIPE SIZE IF DEVELOPED LENGTH EXCEEDS 40 FEET.
 - INTERCEPTOR INSTALLATION TO COMPLY WITH JURISDICTIONAL PLUMBING AND WASTEWATER AUTHORITY STANDARDS AND REQUIREMENTS.

ACCEPTANCE BLOCK
THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.



CITY DEVELOPMENT ENGINEER DATE
CITY PLANNER DATE



UTILITIES AND AGENCIES		
CITY OF GRAND JUNCTION SANITARY SEWER	MARK BARSUND	970-201-1362
CITY OF GRAND JUNCTION WATER	MARK BARSUND	970-201-1362
GRAND VALLEY IRRIGATION COMPANY	PHIL BERTRAND	970-242-2762
CITY OF GRAND JUNCTION PUBLIC WORKS	MARK BARSUND	970-201-1362
XCEL ENERGY - GAS & ELECTRIC	MIKE EASTER	970-244-2660
CENTURY LINK	CHRIS JOHNSON	970-244-4333
CHARTER	JOHN VALDEZ	970-245-8750
MESA COUNTY STORMWATER	JOSH MARTINEZ	970-683-4206

LEGEND	
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING BUILDING
	PROPOSED BUILDING
	EXISTING CURB/GUTTER
	PROPOSED CURB/GUTTER
	PROPOSED SPILL CURB/GUTTER
	PROPOSED TRANSITION CURB/GUTTER
	EXISTING RETAINING WALL
	EXISTING 1-FT CONTOUR
	EXISTING 5-FT CONTOUR
	PROPOSED 1-FT CONTOUR
	PROPOSED 5-FT CONTOUR
	EXISTING ASPHALT
	PROPOSED ASPHALT
	PROPOSED DEMO
	PROPOSED LANDSCAPE
	EXISTING CONCRETE
	PROPOSED CONCRETE
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER MANHOLE
	EXISTING SAN. SEWER CLEANOUT
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING STORM SEWER INLET
	PROPOSED STORM SEWER INLET
	EXISTING STORM SEWER MANHOLE
	PROPOSED STORM SEWER MANHOLE
	PROPOSED INLINE DRAIN
	EXISTING 8" WATER MAIN
	PROPOSED 2" DOMESTIC SERVICE
	PROPOSED FIRE LINE
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	EXISTING WATER METER
	PROPOSED WATER METER
	PROPOSED METER/BACKFLOW VAULT
	PROPOSED IRRIGATION MANHOLE
	PROPOSED FENCE
	EXISTING FENCE
	PROPOSED TRAFFIC FLOW
	GRADE BREAK
	ROOF DRAIN (RD)
	STREET LIGHT POLE
	FIRE DEPARTMENT CONNECTION
	PARKING LOT LIGHT
	PROPOSED BUILDING LIGHT
	POWER POLE
	FLOWLINE
	EDGE OF PAVEMENT
	TOP OF CONCRETE
	FIRE DEPARTMENT CONNECTION BUILDING
	PROPERTY LINE
	TOP OF CURB
	BACK OF CURB
	LINEAR FEET
	UTILITY PEDESTALS
	BENCHMARK

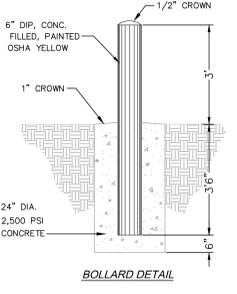
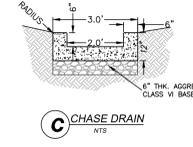
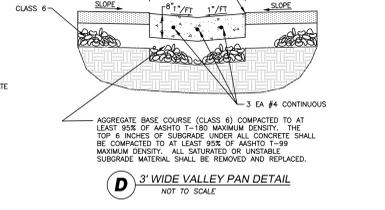
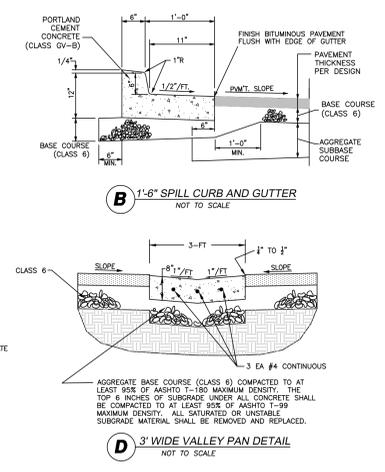
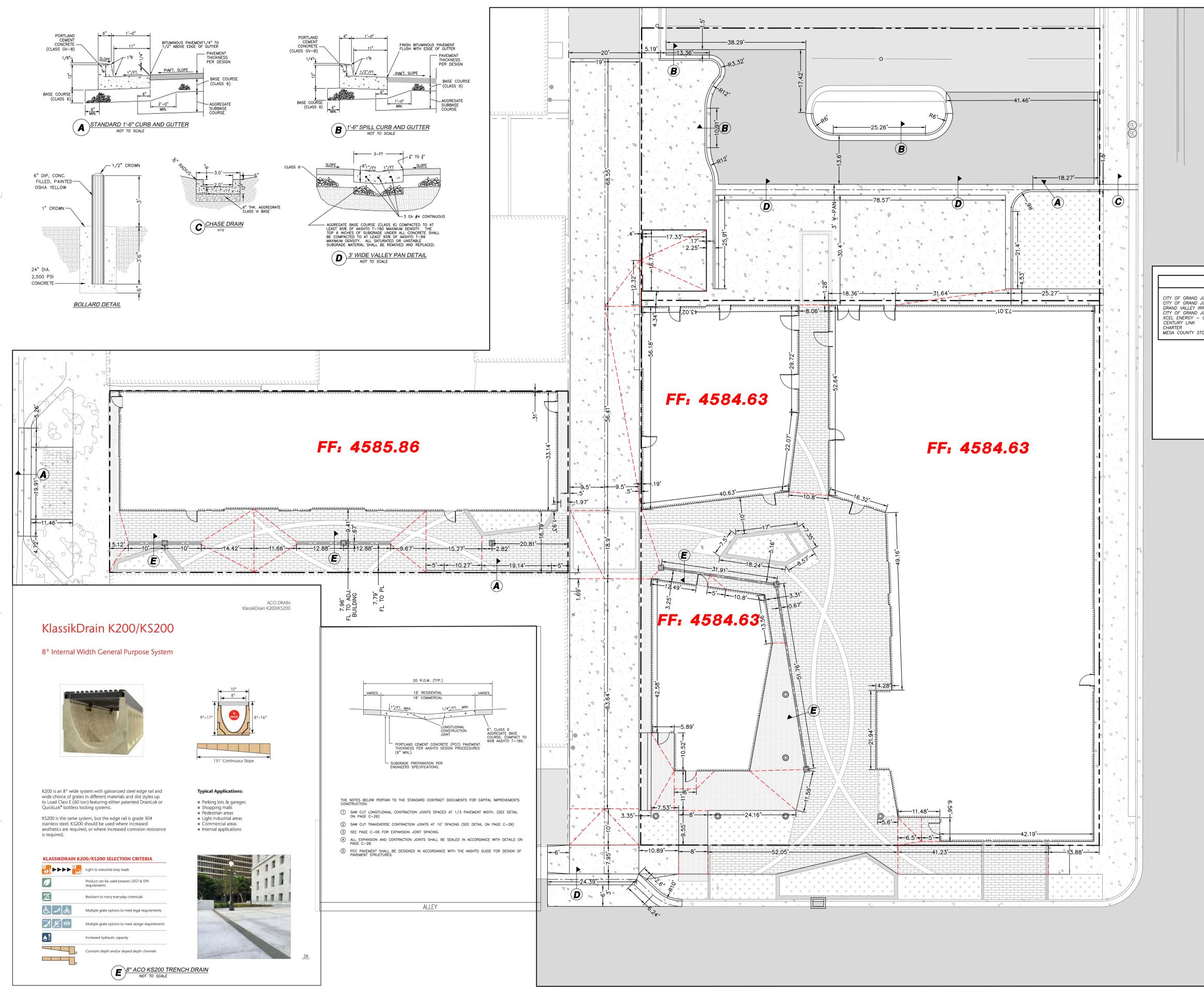


REV: _____
DRAWN: RRA
REVIEWED: STS
DATE: 01/30/26
PERMIT SET
PROJECT #: 1360.0002
FILE: _____
SHEET TITLE: HORIZONTAL PLAN

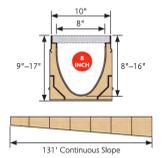
ACCEPTANCE BLOCK
THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.
CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

CITY DEVELOPMENT ENGINEER _____ DATE _____
CITY PLANNER _____ DATE _____

SCALE: 1" = 10'
NO. **C.09**



KlassikDrain K200/KS200
8" Internal Width General Purpose System

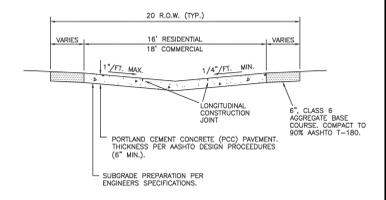


Typical Applications:

- Parking lots & garages
- Shopping malls
- Pedestrian areas
- Light industrial areas
- Commercial areas
- Internal applications

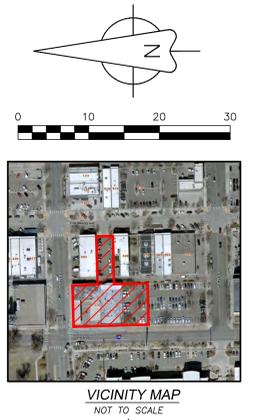
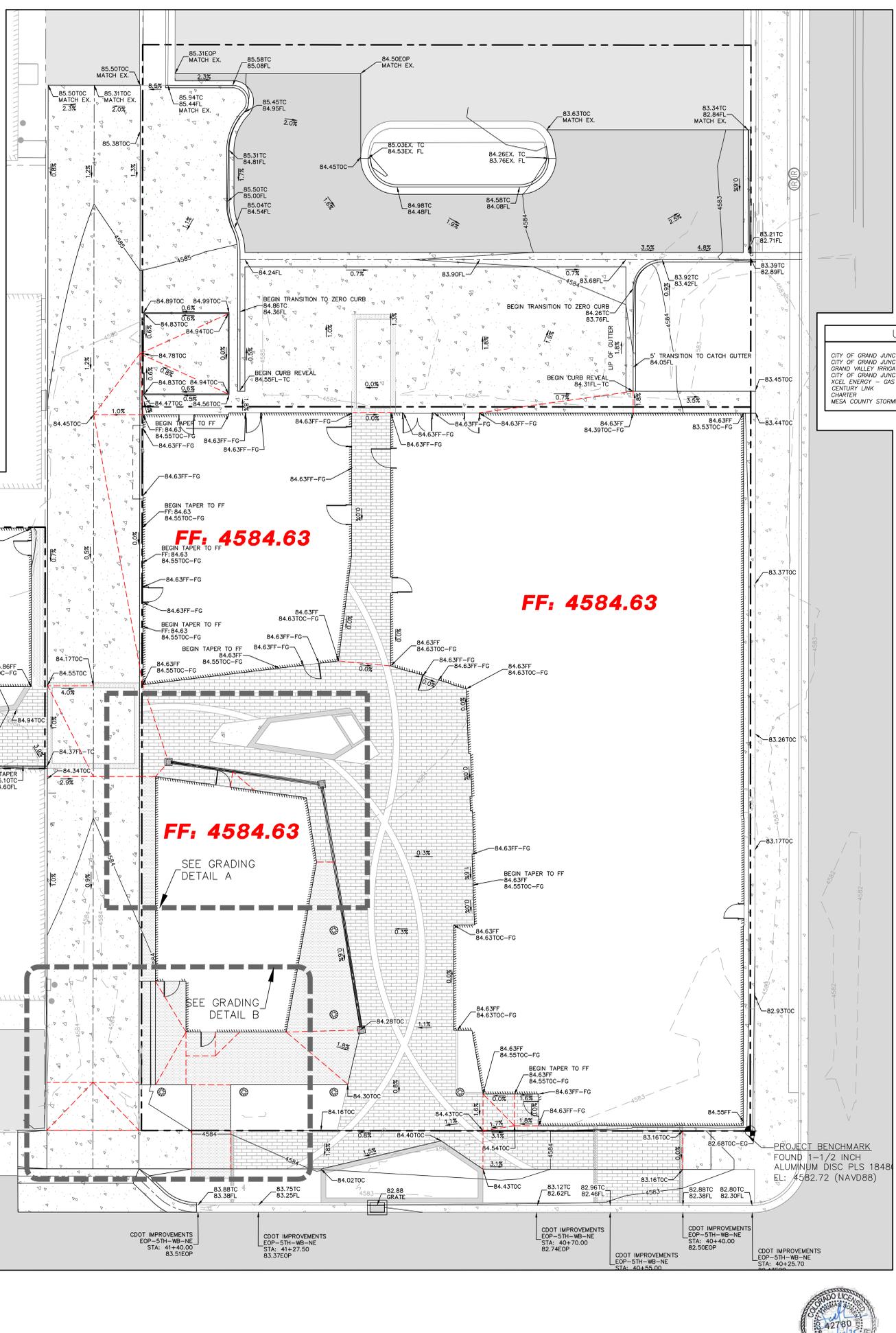
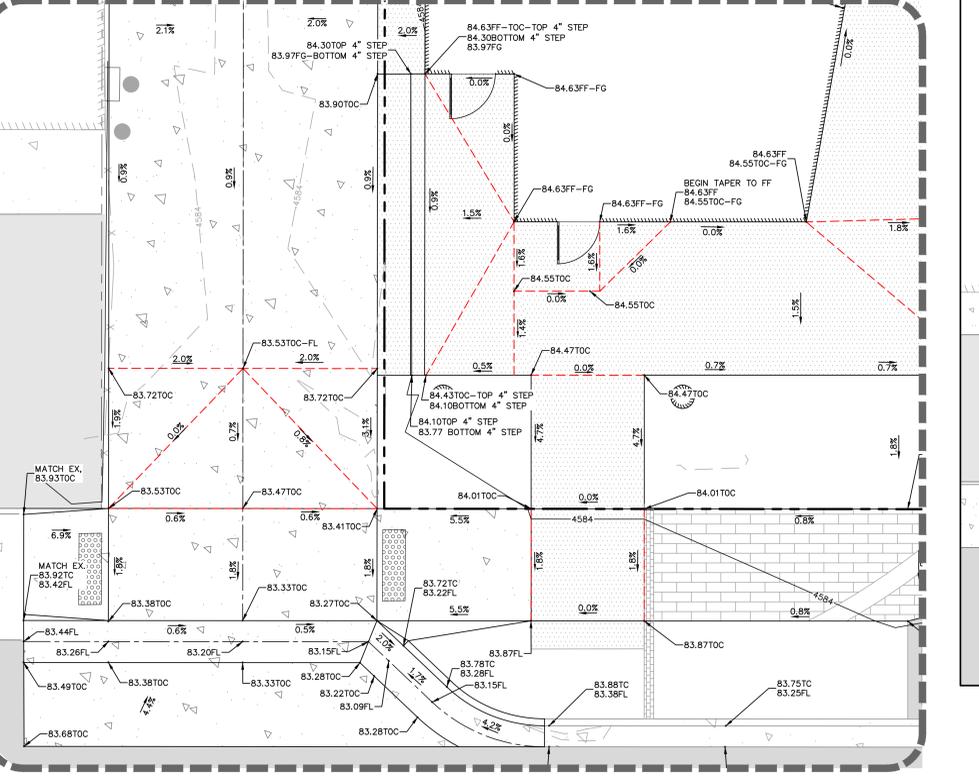
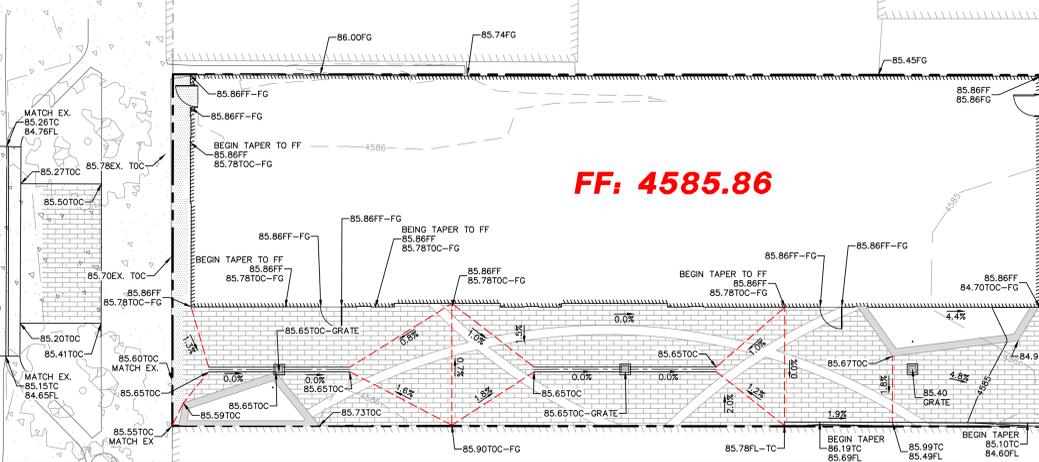
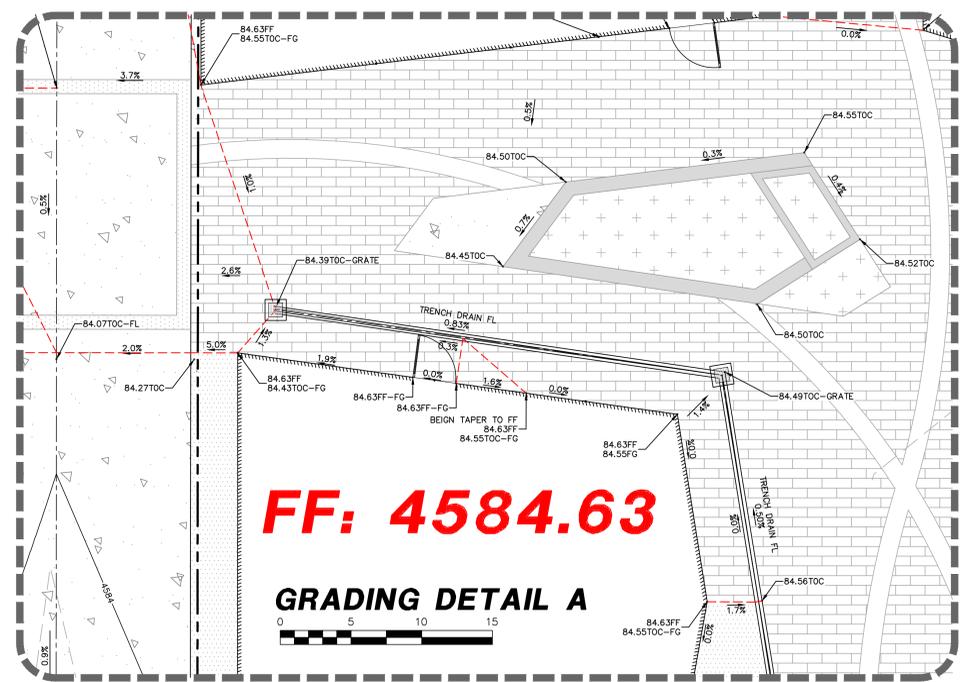


8" ACO KS200 TRENCH DRAIN
NOT TO SCALE



THE NOTES BELOW PERTAIN TO THE STANDARD CONTRACT DOCUMENTS FOR CAPITAL IMPROVEMENTS CONSTRUCTION:
 ① SAW CUT LONGITUDINAL CONTRACTION JOINTS SPACED AT 1/3 PAVEMENT WIDTH. (SEE DETAIL ON PAGE C-28)
 ② SAW CUT TRANSVERSE CONTRACTION JOINTS AT 10' SPACING (SEE DETAIL ON PAGE C-28)
 ③ SEE PAGE C-08 FOR EXPANSION JOINT SPACING.
 ④ ALL EXPANSION AND CONTRACTION JOINTS SHALL BE SEALED IN ACCORDANCE WITH DETAILS ON PAGE C-28.
 ⑤ RIGID PAVEMENT SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES.

P:\1360.0002 - The Terminal\Drawings\CAD\Production Drawings\PROCD SITE - Terminal RBA.dwg, 1/16/2026 2:02:56 PM, DWG To PDF.pcf



UTILITIES AND AGENCIES

CITY OF GRAND JUNCTION SANITARY SEWER	MARK BARSLUND	970-201-1362
CITY OF GRAND JUNCTION WATER	MARK BARSLUND	970-201-1362
GRAND VALLEY IRRIGATION COMPANY	PAUL BERTRAND	970-242-2782
CITY OF GRAND JUNCTION PUBLIC WORKS	MARK BARSLUND	970-201-1362
XCEL ENERGY - GAS & ELECTRIC	MIKE EASTER	970-244-2660
CENTURY LINK	CHRIS JOHNSON	970-244-4333
CHARTER	JOHN VALDEZ	970-245-8750
MESA COUNTY STORMWATER	JOHN MARTINEZ	970-683-4206

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING BUILDING
- PROPOSED BUILDING
- EXISTING CURB/GUTTER
- PROPOSED CURB/GUTTER
- EXISTING SPILL CURB/GUTTER
- PROPOSED SPILL CURB/GUTTER
- EXISTING TRANSITION CURB/GUTTER
- PROPOSED TRANSITION CURB/GUTTER
- EXISTING RETAINING WALL
- EXISTING 1'-FT CONTOUR
- PROPOSED 1'-FT CONTOUR
- EXISTING 5'-FT CONTOUR
- PROPOSED 5'-FT CONTOUR
- EXISTING ASPHALT
- PROPOSED ASPHALT
- EXISTING DEMO
- PROPOSED DEMO
- EXISTING LANDSCAPE
- PROPOSED LANDSCAPE
- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING PATTERNED CONC.
- PROPOSED PATTERNED CONC.
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SAN. SEWER CLEANOUT
- PROPOSED SAN. SEWER CLEANOUT
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER INLET
- PROPOSED STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING INLINE DRAIN
- PROPOSED INLINE DRAIN
- EXISTING 8" WATER MAIN
- PROPOSED 2" DOMESTIC SERVICE
- EXISTING FIRE LINE
- PROPOSED FIRE LINE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING WATER METER
- PROPOSED WATER METER
- EXISTING METER/BACKFLOW VAULT
- PROPOSED METER/BACKFLOW VAULT
- EXISTING IRRIGATION MANHOLE
- PROPOSED IRRIGATION MANHOLE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING FENCE
- PROPOSED TRAFFIC FLOW
- EXISTING GRADE BREAK
- PROPOSED GRADE BREAK
- EXISTING ROOF DRAIN (RD)
- PROPOSED ROOF DRAIN (RD)
- EXISTING STREET LIGHT POLE
- PROPOSED STREET LIGHT POLE
- EXISTING FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE DEPARTMENT CONNECTION
- EXISTING PARKING LOT LIGHT
- PROPOSED PARKING LOT LIGHT
- EXISTING BUILDING LIGHT
- PROPOSED BUILDING LIGHT
- EXISTING POWER POLE
- PROPOSED POWER POLE
- EXISTING FLOWLINE
- PROPOSED FLOWLINE
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- EXISTING TOP OF CONCRETE
- PROPOSED TOP OF CONCRETE
- EXISTING FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE DEPARTMENT CONNECTION
- EXISTING BUILDING PROPERTY LINE
- PROPOSED BUILDING PROPERTY LINE
- EXISTING TOP OF CURB
- PROPOSED TOP OF CURB
- EXISTING BACK OF CURB
- PROPOSED BACK OF CURB
- EXISTING LINEAR FEET
- PROPOSED LINEAR FEET
- EXISTING UTILITY PEDESTALS
- PROPOSED UTILITY PEDESTALS
- EXISTING BENCHMARK
- PROPOSED BENCHMARK

ACCEPTANCE BLOCK

THE CITY OF GRAND JUNCTION REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE CITY'S DEVELOPMENT STANDARDS, SUBJECT TO THESE PLANS BEING SEALED, SIGNED, AND DATED BY THE PROFESSIONAL OF RECORD. REVIEW BY THE CITY DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN. THE CITY NEITHER ACCEPTS NOR ASSUMES ANY LIABILITY FOR ERRORS OR OMISSIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL OF RECORD.

CONSTRUCTION MUST COMMENCE WITHIN ONE YEAR FROM THE DATE OF PLAN SIGNATURE.

CITY DEVELOPMENT ENGINEER _____ DATE _____

CITY PLANNER _____ DATE _____



DRAWN: RRA
 REVIEWED: STS
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 1360.0002
 FILE: SHEET TITLE GRADING PLAN

SCALE: 1" = 10'
 NO. **C.10**

P:\1360\0002 - The Terminal Drawings\CAD Production Drawings\PROD SITE - Terminal RBA.dwg, 1/16/2026 2:03:13 PM, DWG To PDF.pc3

EXISTING TREE PROTECTION NOTES

1. CONTRACTOR TO VERIFY TREE SPECIES BEFORE REMOVAL
2. INSTALL CONSTRUCTION FENCING AROUND EACH EXISTING TREE NOTED AS "TO REMAIN PROTECTED IN PLACE" PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ON SITE
3. BUILD CUPS AND DAMS WITHIN THE DRIP LINE OF EACH EXISTING TREE TO RETAIN WATER
4. WATER EACH EXISTING TREE ON A REGULAR BASIS
5. NO CONSTRUCTION ACTIVITY WHATSOEVER MAY TAKE PLACE ANYWHERE WITHIN EACH EXISTING TREE DRIFLINE

EXISTING TREE SCHEDULE NOTES

1. TREES 4" CALIPER OR GREATER REMOVED FROM SITE ARE REQUIRED FOR MITIGATION.
2. LANDSCAPE ARCHITECT DEFERS TO CERTIFIED ARBORIST EVALUATION, IF CERTIFIED ARBORIST REPORT DEEMS SOME OR ALL TREES OF LESSER VALUE NOT REQUIRING MITIGATION, THEN REQUIRED MITIGATION SHALL DECREASE ACCORDINGLY.
3. TREES IDENTIFIED AS TYPES TO EXHIBIT CHARACTERISTICS INCLUDING: EXTREME INSECTS OR DISEASE SUSCEPTIBILITY, SOFT OR BRITTLE WOOD, TOXIC TO OTHER PLANTS SHALL BE EXEMPT FROM MITIGATION REQUIREMENTS. SPECIES EXAMPLES: BLACK LOCUST, COTTONWOOD, ELM, BLACK WALNUT, ETC.
4. TREE REMOVAL - EXISTING TREE TO BE REMOVED - REMOVE OR GRIND STUMPS BELOW A MINIMUM OF 12" BELOW GRADE. BACKFILL VOID WITH TOPSOIL. WHEN REMOVING TREES, CONTRACTOR SHALL BE CAUTIOUS TO POSSIBLE ROOT GROWTH AROUND EXISTING UTILITIES AND SHALL CAUTIOUSLY REMOVE OR BE RESPONSIBLE FOR REPAIRING ANY AFFECTED UTILITIES OR EXISTING STRUCTURES THAT ARE HARMED IN THE REMOVAL OF TREES.

TREE PRESERVATION AND REMOVAL MITIGATION

REQUIREMENT	WHERE SIGNIFICANT TREES EXIST ON A PROPERTY, AT LEAST ONE AND NO LESS THAN 30% OF SIGNIFICANT TREES SHALL BE PRESERVED.		
TABLE 21.07.3. TREE REPLACEMENT REQUIREMENTS	PERCENT OF TREES PRESERVED	TREE REPLACEMENT RATIO	SITE APPLICABILITY
MINIMUM 30% PRESERVATION		3 CALIPER INCHES PER 5 INCHES DBH [1]	
ABOVE 30% MINIMUM		1 CALIPER INCH PER 3 INCHES DBH [2]	X
SIGNIFICANT TREES DAMAGED OR KILLED DURING CONSTRUCTION		3 CALIPER INCHES PER 5 INCHES DBH [1]	

NOTES:
 [1] IF DEVELOPER CANNOT REPLACE TREES ON-SITE, THEY MAY PAY A FEE-IN-LIEU ACCORDING TO GJMC § 21.07.04(01)
 [2] SEE GJMC § 21.07.04(01)(1)(b) FOR CREDIT APPLIED TO PRESERVED TREES.
 SITE NOTES:
 THERE ARE EIGHT SIGNIFICANT TREES ON SITE, THREE OF WHICH ARE TO BE REMOVED DUE TO SITE DEVELOPMENT, AND FIVE OF WHICH ARE TO BE PROTECTED IN PLACE.
 TREE MITIGATION INCHES PROVIDED: 3.5 CALIPER INCHES
 A. (1) 1.5" CALIPER ORNAMENTAL TREE BEYOND CODE MINIMUM WITHIN INTERNAL SITE PLANTING
 B. (1) 2" CALIPER SHADE TREE BEYOND CODE MINIMUM ON 5TH STREET ROW.
 TREE MITIGATION FEE-IN-LIEU TO BE DETERMINED BASED ON ASSESSED TREE REMOVAL DBH TOTAL.

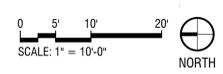
TREE MITIGATION PLAN LEGEND

-  EXT - EXISTING TREE TO REMAIN PROTECTED IN PLACE WITH TREE PROTECTION FENCING - SEE TREE PROTECTION NOTES FOR MORE INFORMATION
-  EXR - EXISTING TREE TO BE REMOVED - IN CONFLICT WITH PROPOSED BUILDING
-  TREE PROTECTION FENCING

NOTE: REFER TO DETAIL A/L6.51 FOR TREE PROTECTION.



A TREE PROTECTION AND REMOVAL PLAN
 SCALE: 1"=10'-0"



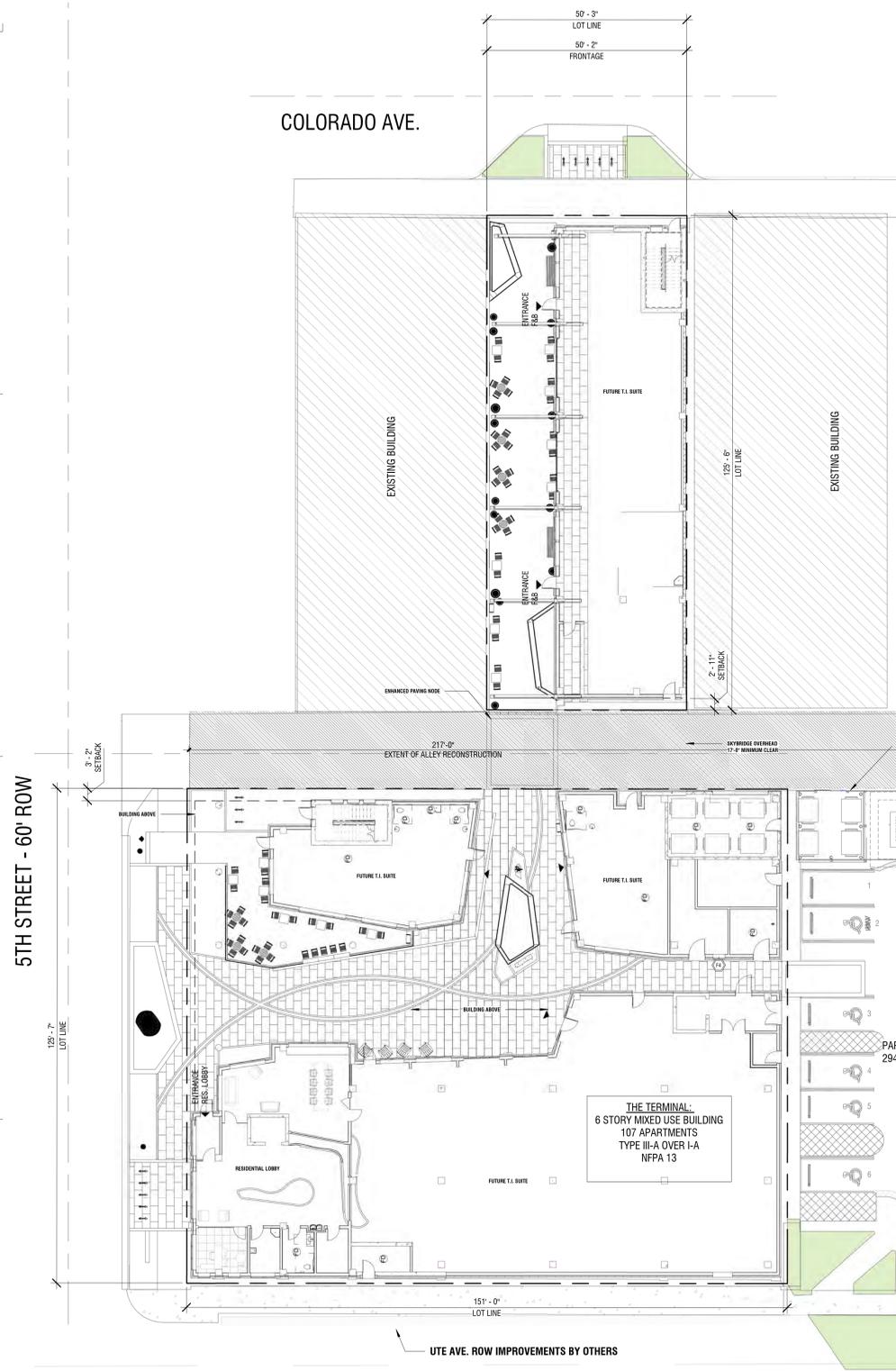
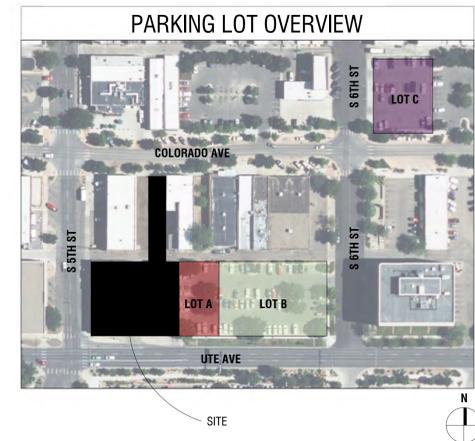


REV:

DRAWN: JS
REVIEWED: KM
DATE: 01/30/26
PROJECT #: Z3017
FILE:
SHEET TITLE:
ARCHITECTURAL
SITE PLAN

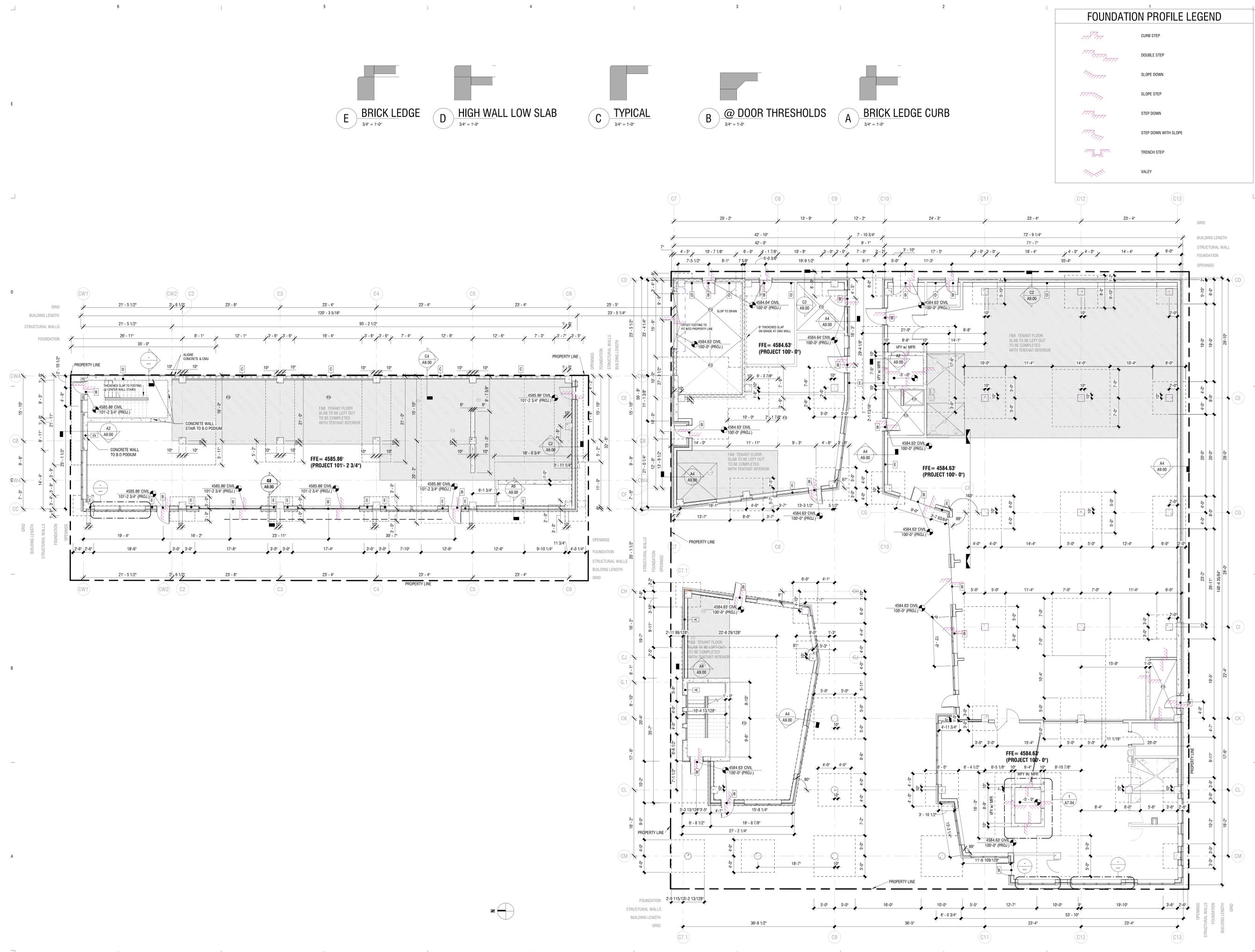
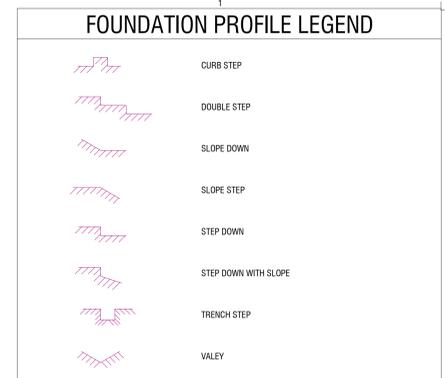
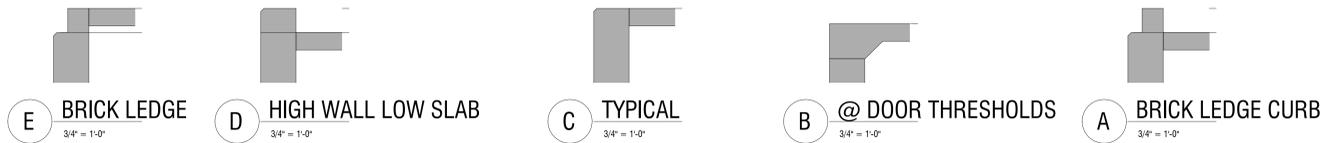
SCALE: As Indicated

PARKING CALCULATION		
BEDROOMS	REQUIREMENT PER STUDIO / BR	CALCULATION
STUDIO: 20	STUDION = 1 PARKING SPACE	STUDIO: 20 x 1 = 20
1 BEDROOM: 58	1 BR = 1 PARKING LOT	1 BEDROOM: 58 x 1 = 58
2 BEDROOM: 29	2 BR = 1.5 PARKING LOT	2 BEDROOM: 29 x 1.5 = 44
TOTAL = 107 UNITS		TOTAL PARKING SPACES = 122
ADDITIONAL PARKING REDUCTION		
BUS STOP WITHIN 1/4 MILE OF PROJECT	-5%	PARKING LOT A: 16 (4+1 VAN ADA + 11 NON ADA)
122 - 5% = 116		PARKING LOT B: 64
BIKE PARKING MIN. 5 BICYCLE SPACES	-5%	PARKING LOT C: 30
116 - 5% = 110		TOTAL = 110



ARCHITECTURAL SITE PLAN - PARKING LOT A & B
1/16" = 1'-0"





DESIGN CRITERIA

- STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH IBC 2021 AND SUBSEQUENT REFERENCE STANDARDS.
- RISK CATEGORY II
- LIVE LOADS: LIVE LOAD REDUCTION USED AS ALLOWED PER CODE

ROOF	TYPICAL	30 PSF
	TYPICAL	40 PSF
	CORRIDORS, STAIRS & PUBLIC AREAS	100 PSF
FLOOR	PARTITION WALL	15 PSF
	MEP ROOMS (SEE MECHANICAL UNITS NOTE BELOW.)	60 PSF
	ELEVATOR MACHINE ROOM	125 PSF
	RESIDENTIAL	40 PSF
OTHER	HANDRAILS	MAX OF 50 PLF HORIZ PLUS 50 PLF VERT OR 200 LBS IN ANY DIRECTION, APPLIED AT TOP OF RAILING
	UNIFORM	40 PSF
	WHEEL	3000 LBS UON
PARKING		6 KIPS (SERVICE LEVEL) AT EITHER 1'-0" OR 2'-0" ABOVE TOP OF FLOOR AT ALL LOCATIONS SUBJECT TO VEHICULAR TRAFFIC AND PARKING

- MECHANICAL UNITS: THE CONTRACTOR SHALL CONFIRM THE ACTUAL MECHANICAL UNITS PURCHASED ARE OF WEIGHT AND SIZE SUCH THAT:
 - THE UNIT WEIGHT IS LESS THAN OR EQUAL TO WEIGHT LISTED ON PLAN.
 - THE UNIT LENGTH IS LESS THAN 15 FEET, IF UNIT LENGTH IS GREATER THAN 15 FEET, SNOW DRIFT ON ROOF SHALL BE ACCOUNTED FOR.
 - THE TOTAL SUPERIMPOSED LOAD UNDER EACH UNIT DOES NOT EXCEED THE LIVE LOAD FOR WHICH THE FLOOR WAS DESIGNED IN THE FLOOR AREA WHERE THE UNIT IS LOCATED AS INDICATED BY THE EQUATION BELOW:

TOTAL SUPERIMPOSED LOAD UNDER UNIT =	TOTAL EQUIPMENT WEIGHT / UNIT FOOTPRINT AREA =	INDICATED SERVICE LEVEL DESIGN LIVE LOAD
	OPERATING WEIGHT OF UNIT + CONCRETE HOUSEKEEPING PAD + INERTIA BLOCK + OTHER ANCILLARY ITEMS ASSOCIATED WITH THE EQUIPMENT	
TOTAL EQUIPMENT WEIGHT =	EFFECTIVE AREA OF UNIT OR HOUSEKEEPING PAD, WHICHEVER IS LARGER	
EFFECTIVE AREA =	(LENGTH + 6 FEET) X (WIDTH + 6 FEET)	

- CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION ON THE LOCATION OF ANY MECHANICAL UNITS WHERE THE SUPERIMPOSED LOAD UNDER THE UNIT EXCEEDS THE INDICATED DESIGN SIZE AND LOAD FOR THE ROOF AND/OR LIVE LOAD FOR THE FLOOR AS INDICATED ON THE PLAN.
- PREFABRICATED TRUSS LOADS:

ROOF (TYPICAL)	DEAD LOAD AT TOP CHORD	20 PSF*
	DEAD LOAD AT BOTTOM CHORD	10 PSF*
	LIVE LOAD AT TOP CHORD	SEE SNOW LOAD SECTION
	LIVE LOAD AT BOTTOM CHORD	0 PSF
	WIND LOAD	SEE WIND LOAD SECTION***
	DEAD LOAD AT TOP CHORD	50 PSF**
ROOF (MECHANICAL PLATFORMS ON ROOF TRUSSES)	DEAD LOAD AT BOTTOM CHORD	15 PSF*
	LIVE LOAD AT TOP CHORD	SEE SNOW LOAD SECTION
	LIVE LOAD AT BOTTOM CHORD	0 PSF
	DEAD LOAD AT TOP CHORD	25 PSF**
	DEAD LOAD AT BOTTOM CHORD	10 PSF**
FLOOR	LIVE LOAD AT TOP CHORD	SEE LIVE LOAD SECTION
	LIVE LOAD AT BOTTOM CHORD	0 PSF

- * DEAD LOADS DO NOT ACCOUNT FOR SELF-WEIGHT OF TRUSS. TRUSS SUPPLIER TO ACCOUNT FOR SELF-WEIGHT IN TRUSS DESIGN.
** PROVIDE ADDITIONAL LIVE LOAD DUE TO SNOW DRIFTING PER SNOW LOAD SECTION.
*** WHERE TRUSS ALIGNS WITH SHEAR WALL BELOW, DESIGN TRUSS FOR SHEAR LOAD LISTED IN SHEAR WALL SCHEDULE.
- SNOW:

GROUND SNOW	24 PSF
SNOW EXPOSURE FACTOR	0.9
TEMPERATURE FACTOR	1.0
IMPORTANCE FACTOR	1.0
FLAT-ROOF SNOW	25 PSF
RAIN-ON-SNOW SURCHARGE	5 PSF
DESIGN SNOW	35 PSF

- SEISMIC:

IMPORTANCE FACTOR	1.0
SITE CLASS	D
Ss	2.2 g
S1	0.48 g
SDS	1.8 g
SD1	0.74 g
- SEISMIC FORCE RESISTING SYSTEM
Light-frame (wood) walls sheathed with structural panels
- RESPONSE MODIFICATION COEFFICIENT, R
Cd 4
- ANALYSIS PROCEDURE
EQUVALENT LATERAL FORCE
- SEISMIC RESPONSE COEFFICIENT, CS
0.039
- DESIGN BASE SHEAR (STRENGTH LEVEL)
136 KIPS E-W, 40KIPS N-S

BASIC WIND SPEED	VULT = 105 MPH VSD = 90 MPH		
EXPOSURE CLASS	C		
INTERNAL PRESSURE COEFFICIENT, GcP1	±0.18		
COMPONENTS & CLADDING:			
ROOF COMPONENTS	ZONE 1	ZONE 2	ZONE 3
SUPPORT BEAMS (A=100 SF)	36.9 PSF	59.3 PSF	77.2 PSF
ROOF SHEATHING (A=50 SF)	39.4 PSF	62.9 PSF	86.3 PSF
DECK FASTENERS (A=10 SF)	45.3 PSF	71.1 PSF	96.9 PSF
WALL COMPONENTS	ZONE 4	ZONE 5	
A=200 SF	20.6 PSF	23 PSF	
A=50 SF	30.4 PSF	30.4 PSF	
A=20 SF	30.9 PSF	30.9 PSF	

- C, C NOTES:
 - THE PRESSURES LISTED ARE IN ACCORDANCE IBC AND ASCE 7, AND THE DESIGN FORCES USED BY THE SUBCONTRACTOR FOR A SPECIFIC APPLICATION ARE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
 - WIND PRESSURES ARE ULTIMATE DESIGN LEVEL.
 - SUBMIT DESIGN CALCULATIONS SIGNED AND SEALED BY A LICENSED ENGINEER IN THE PROJECT'S JURISDICTION FOR ANY DESIRED MODIFICATION TO THE STATED PRESSURES.

- ALL LATERAL LOAD RESISTANCE AND STABILITY OF THE BUILDING IN THE COMPLETED STRUCTURE IS PROVIDED BY WOOD AND CONCRETE SHEAR WALLS IN EACH ORTHOGONAL DIRECTION. SEE PLANS FOR LOCATIONS. THE WOOD SHEATHING AND CONCRETE PODIUM SHOULD BE HORIZONTAL DIAHRAGMS DISTRIBUTING THE LATERAL FORCES TO THE VERTICAL LATERAL ELEMENTS WHICH IN TURN CARRY THE LOAD TO THE BUILDING FOUNDATIONS.

GENERAL

- DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONNEL AND PROPERTY ON AND AROUND THE JOBSITE. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, GUYS, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES. TEMPORARY BRACING OR SHORING SHALL BE PROVIDED AS INDICATED ON THE CONTRACT DOCUMENTS TO PREVENT TORSION ON THE SUPPORTING STEEL FRAMING. DESIGN FRAMING MEMBERS IN COMMUNICATING STAIRS AND MONUMENTAL STAIRS TO LIMIT LIVE LOAD DEFLECTION TO THE SMALLER OF 1/600 OR 1/4" SIZE STAIR FRAMING MEMBERS TO PROVIDE A STAIR ASSEMBLY WITH A NATURAL FREQUENCY > 5 HERTZ AND PEAK ACCELERATION: $apq = 0.015$, AS COMPUTED PER ASCE DESIGN GUIDE, 11 EQUATION 2.3 USING INDOOR CORNER FOOTBRIDGE CRITERIA.
c. SEE ARCHITECTURAL DRAWINGS FOR STEEL STAIR DETAILS, DESIGN OF FRAMING MEMBERS AND CONNECTIONS TO BE BY SPECIALTY ENGINEER, WORKING DIRECTLY WITH THE STAIR DETAILER AND FABRICATOR, WHERE SUPPORT POSTS ARE REQUIRED, PROVIDE 3'-0" SQUARE X 1'-0" THICKENED SLAB WITH (4)#6 BOTTOM AT BASE OF STAIR.
- FAÇADE:
 - DESIGN AND DETAILING OF THE FAÇADE SYSTEM AND CONNECTIONS TO THE STRUCTURE SHALL TAKE INTO CONSIDERATION THE FOLLOWING MOVEMENTS:
 - ±1/2" VERTICAL DIFFERENTIAL DEFLECTION OF SLAB EDGES ON ADJACENT FLOORS
 - ±1/2" HORIZONTAL DIFFERENTIAL DEFLECTION BETWEEN ADJACENT FLOORS
 - DIFFERENTIAL THERMAL EXPANSION / CONTRACTION BETWEEN FAÇADE SYSTEM AND SUPPORTING PRIMARY STRUCTURAL SYSTEM
 - THE FAÇADE SHALL NOT BE INSTALLED UNTIL AFTER THE SUPERSTRUCTURE HAS BEEN PLUMBED. ALL FRAMING CONNECTIONS HAVE BEEN INSTALLED, AND ALL SHORES AND SHORING HAVE BEEN REMOVED.
 - WHERE STRUCTURAL STEEL HORIZONTAL GIRTS ARE PROVIDED, THOSE GIRTS MAY BE USED ONLY TO RESIST LATERAL LOADS FROM THE FAÇADE. VERTICAL LOADS MAY NOT BE IMPOSED BY THE FAÇADE UPON THE GIRT FRAMINGS UNLESS THE SECTIONS AND DETAILS ON THE STRUCTURAL DRAWINGS SPECIFICALLY INDICATE THAT FAÇADE GRAVITY LOAD CONNECTIONS MAY BE MADE TO THE GIRTS.
- EARTHWORK
 - FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT NO. 0742-001 DATED NOVEMBER 7, 2023 BY HUDDLESTON-BERRY. FOLLOW RECOMMENDATIONS IN REPORT FOR ALL FOUNDATION WORK. REPORT IS ON FILE WITH THE ARCHITECT.
 - FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INFORMATION SHOWN ON THE EXISTING BUILDING DRAWINGS. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
 - FOUNDATION DESIGN IS IN ACCORDANCE WITH THE BUILDING CODE ALLOWABLE BEARING CAPACITIES. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
 - SOIL PROPERTIES:

COEFFICIENT OF FRICTION	0.32
ACTIVE	45 PSF/FT (DRAINED)
AT REST	65 PSF/FT (DRAINED)
 - SUBGRADE PREPARATION FOR FOOTINGS AND SLABS-ON-GRADE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL DIRECT QUESTIONS REGARDING THE SUBGRADE PREPARATION REQUIREMENTS TO THE GEOTECHNICAL ENGINEER.
 - A GEOTECHNICAL ENGINEER SHALL BE EMPLOYED TO VERIFY THAT THE PRESUMED ALLOWABLE BEARING PRESSURE WILL BE ACHIEVED PRIOR TO CONSTRUCTION. THAT ENGINEER SHALL DEVELOP AND ENSURE IMPLEMENTATION OF A SITE SUBGRADE PREPARATION PROGRAM AS REQUIRED TO ACHIEVE THE PRESUMED SOIL BEARING PRESSURE. FOOTING AND SLAB-ON-GRADE SUBGRADE PREPARATION SHALL BE IN COMPLIANCE WITH THE APPLICABLE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- ANY TESTS, INSPECTIONS, FIELD OBSERVATIONS, OR APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL BE PERFORMED PRIOR TO PLACEMENT OF CONCRETE. ALTERATIONS TO SITE PREPARATION OR GRADING SHALL BE REPORTED TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
- PROPERTY LINE LOCATIONS INDICATED ON FOUNDATION PLANS ARE APPROXIMATE. SEE ARCHITECTURAL AND/OR SITE DRAWINGS FOR LOCATION OF THE STRUCTURE ON THE SITE.
- ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING / BASEMENT WALLS BEFORE CONCRETE HAS ATTAINED SPECIFIED COMPRESSIVE STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS BELOW GRADE FROM LATERAL LOADS UNTIL SUPPORTING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED 7-DAY STRENGTH MINIMUM. BACKFILLING IS NOT PERMITTED FOR FOUNDATION WALLS UNTIL SUPPORTED SLAB TOP AND BOTTOM ARE IN PLACE OR THE WALL IS ADEQUATELY BRACED TO RESIST LATERAL LOADS.
- SOIL BEHIND RETAINING WALLS AND BASEMENT WALLS SHALL BE DRAINED TO ELIMINATE HYDROSTATIC PRESSURE BEHIND THE WALL. DESIGN OF SUCH WALL DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUNDWATER, OR SEEPAGE. DETAILS OF GROUNDWATER INFORMATION SHALL BE OBTAINED FROM THE GEOTECHNICAL REPORT. IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION, PROCEDURES SHALL BE IMPLEMENTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- PROVIDE SHORING WHERE THERE IS INSUFFICIENT SPACE FOR STABLE-SLOPED EMBANKMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, SHORING, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, AND FOUNDATIONS. IF ANY SUCH MATERIAL OR STRUCTURES ARE FOUND, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.
- ANY REQUIRED IMPORT FILL SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTING.
- UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL. BELOW-OR-PIPE ELEVATIONS, WHERE SHOWN, ARE INDICATED ONLY. REQUIRED ELEVATIONS SHALL BE DETERMINED BY OTHERS AND COORDINATED WITH THE FOUNDATIONS.
- WHERE GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF WALLS, BACKFILL SHALL BE PLACED SO THAT IT IS NOT UNBALANCED BY MORE THAN 2 FEET ON EITHER SIDE.
- ALL REQUIRED BACKFILL AND UTILITY TRENCH BACKFILL WITHIN THE BUILDING AREA SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

- FIRE PROTECTION FOR ALL STRUCTURAL PARTS SHALL BE PROVIDED AS SPECIFIED BY THE ARCHITECTURAL DRAWINGS. UL FIRE RESISTANCE RATING RESTRAINT CLASSIFICATION AS FOLLOWS:
 - PRIMARY STRUCTURAL FRAME" AS DEFINED BY IBC SECTION 202 IS "RESTRAINED" EXCEPT AS INDICATED IN FOLLOWING NOTE
 - THE FOLLOWING FRAMING IS "UNRESTRAINED":
 - FRAMING SUPPORTED BY BEARING WALLS, OTHER THAN CAST-IN-PLACE CONCRETE WALLS, IN END BAYS AND OTHER LOCATIONS WHERE THE END OF THE FRAMING IS NOT ABUTTING FRAMING IN AN ADJACENT BAY.
 - HOLLOW CORE SLABS IN END BAYS AND OTHER LOCATIONS WHERE THE END OF THE SLAB IS NOT ABUTTING SLABS IN AN ADJACENT BAY.
 - STEEL JOISTS IN END BAYS ON ROOFS SUPPORTING STEEL DECK.
 - ALL WOOD CONSTRUCTION.

SUBMITTALS

- SUBMITTALS ARE:
 - CONCRETE MIX DESIGNS
 - MATERIAL PRODUCT DATA FOR STRUCTURAL MATERIALS
 - CONCRETE REINFORCING
 - ENGINEERED LUMBER
 - HEAVY TIMBER
 - STEEL FABRICATION AND MISCELLANEOUS METALS
- SUBMITTALS SHALL BE REVIEWED AND COORDINATED PRIOR TO SUBMITTING TO THE ARCHITECT. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED INDICATING REVIEW BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND REVIEW BY THE ARCHITECT SHALL NOT BEGIN UNTIL THIS IS COMPLETE. WORK SHALL NOT BEGIN WITHOUT REVIEW BY THE DESIGN PROFESSIONALS.
- SUBMITTALS SHALL BE REVIEWED BY THE DESIGN PROFESSIONALS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT ONLY. NOTATIONS MADE BY THE DESIGN PROFESSIONALS ON THE SHOP DRAWINGS DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS.
- FOR ADDITIONAL INFORMATION ON REQUIRED SUBMITTALS, SEE INDIVIDUAL MATERIAL SECTIONS.

DELEGATED DESIGN

- DELEGATED DESIGNS PER SECTION 107.3.4.1 SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE DESIGN PROFESSIONALS AND REVIEWED PRIOR TO INSTALLATION.
- DELEGATED DESIGNS ARE:
 - EXCAVATION, SHORING, AND UNDERPINNING
 - AGGREGATE PIER FOUNDATION SYSTEM
 - PREFABRICATED TRUSSES
 - PREMANUFACTURED WOOD JOISTS
 - PRECAST CONCRETE ELEMENTS AND CONNECTIONS
- STAIRS:
 - STEEL STAIRS IN STEEL FRAMED STRUCTURES SHALL BE CONFIGURED SO THE STAIR STRINGERS CONNECT TO THE WEBS OF SUPPORTING STRUCTURAL STEEL FLOOR FRAMING MEMBERS. STAIR STRINGERS MAY NOT CONNECT TO SLABS ON DECK. STAIR STRINGER AND HANGER CONNECTIONS SHALL BE CONFIGURED SO THEY CONNECT TO THE SUPPORTING STRUCTURAL STEEL IN A MANNER THAT IMPOSES NO TORSION UPON THE SUPPORTING STRUCTURAL MEMBER. WHERE STAIR HANGERS MUST FRAME ECCENTRIC TO THE SUPPORTING STEEL SUPPLEMENTAL FRAMING SHALL BE PROVIDED AS INDICATED ON THE CONTRACT DOCUMENTS TO PREVENT TORSION ON THE SUPPORTING STEEL FRAMING.
 - DESIGN FRAMING MEMBERS IN COMMUNICATING STAIRS AND MONUMENTAL STAIRS TO LIMIT LIVE LOAD DEFLECTION TO THE SMALLER OF 1/600 OR 1/4" SIZE STAIR FRAMING MEMBERS TO PROVIDE A STAIR ASSEMBLY WITH A NATURAL FREQUENCY > 5 HERTZ AND PEAK ACCELERATION: $apq = 0.015$, AS COMPUTED PER ASCE DESIGN GUIDE, 11 EQUATION 2.3 USING INDOOR CORNER FOOTBRIDGE CRITERIA.
 - SEE ARCHITECTURAL DRAWINGS FOR STEEL STAIR DETAILS, DESIGN OF FRAMING MEMBERS AND CONNECTIONS TO BE BY SPECIALTY ENGINEER, WORKING DIRECTLY WITH THE STAIR DETAILER AND FABRICATOR, WHERE SUPPORT POSTS ARE REQUIRED, PROVIDE 3'-0" SQUARE X 1'-0" THICKENED SLAB WITH (4)#6 BOTTOM AT BASE OF STAIR.
- FAÇADE:
 - DESIGN AND DETAILING OF THE FAÇADE SYSTEM AND CONNECTIONS TO THE STRUCTURE SHALL TAKE INTO CONSIDERATION THE FOLLOWING MOVEMENTS:
 - ±1/2" VERTICAL DIFFERENTIAL DEFLECTION OF SLAB EDGES ON ADJACENT FLOORS
 - ±1/2" HORIZONTAL DIFFERENTIAL DEFLECTION BETWEEN ADJACENT FLOORS
 - DIFFERENTIAL THERMAL EXPANSION / CONTRACTION BETWEEN FAÇADE SYSTEM AND SUPPORTING PRIMARY STRUCTURAL SYSTEM
 - THE FAÇADE SHALL NOT BE INSTALLED UNTIL AFTER THE SUPERSTRUCTURE HAS BEEN PLUMBED. ALL FRAMING CONNECTIONS HAVE BEEN INSTALLED, AND ALL SHORES AND SHORING HAVE BEEN REMOVED.
 - WHERE STRUCTURAL STEEL HORIZONTAL GIRTS ARE PROVIDED, THOSE GIRTS MAY BE USED ONLY TO RESIST LATERAL LOADS FROM THE FAÇADE. VERTICAL LOADS MAY NOT BE IMPOSED BY THE FAÇADE UPON THE GIRT FRAMINGS UNLESS THE SECTIONS AND DETAILS ON THE STRUCTURAL DRAWINGS SPECIFICALLY INDICATE THAT FAÇADE GRAVITY LOAD CONNECTIONS MAY BE MADE TO THE GIRTS.

AGGREGATE PIER GROUND IMPROVEMENT

- SEE THE GEOTECHNICAL REPORT FOR DESIGN AND INSTALLATION REQUIREMENTS FOR THE AGGREGATE PIER GROUND IMPROVEMENT SYSTEM. THE INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.
- THE AGGREGATE PIER GROUND IMPROVEMENT SYSTEM SHALL BE DESIGNED AND INSTALLED TO IMPROVE THE SUBGRADE BELOW FOOTINGS TO MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

NET ALLOWABLE BEARING PRESSURE	PER SHALLOW FOUNDATIONS NOTES
MAXIMUM PERMITTED LONG-TERM SETTLEMENT OF FOOTINGS OVER AGGREGATE PIERS	1"
MAXIMUM PERMITTED LONG-TERM DIFFERENTIAL SETTLEMENT BETWEEN ANY TWO ADJACENT FOOTINGS WHERE EITHER OR BOTH FOOTINGS ARE OVER AGGREGATE PIERS	0.75"

- THE AGGREGATE PIER SYSTEM SHALL BE DESIGNED AND INSTALLED BY A CONTRACTOR WITH AT LEAST TEN YEARS OF EXPERIENCE SUCCESSFULLY DESIGNING AND INSTALLING AGGREGATE PIER GROUND IMPROVEMENT SYSTEMS ON NO FEWER THAN THIRTY PREVIOUS PROJECTS.
 - WITHIN 6" OF THE LOCATION INDICATED ON THE DRAWINGS SUBMITTED FOR REVIEW.
 - PIERS REJECTED DUE TO MISALIGNMENT OR OTHER NON-COMFORMANCE SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
 - COST OF INVESTIGATION AND/OR REDESIGN DUE TO ERRORS BY THE CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR.
- SUBMIT THE FOLLOWING INFORMATION FOR REVIEW:
 - DRAWINGS SHOWING DIMENSIONS AND LOCATIONS OF ALL AGGREGATE PIERS.
 - DESIGN CALCULATIONS FOR AGGREGATE PIER GROUND IMPROVEMENT SYSTEM.
 - DRAWINGS AND WRITTEN PROCEDURES FOR ALL FIELD TESTING TO BE CONDUCTED TO VERIFY LOAD CAPACITY AND SETTLEMENTS OF AGGREGATE PIERS.

SHALLOW FOUNDATIONS

- SEE THE GEOTECHNICAL REPORT FOR SHALLOW FOUNDATION REQUIREMENTS.
- SHALLOW FOUNDATIONS SHALL HAVE THE FOLLOWING MINIMUM NET ALLOWABLE SERVICE LOAD BEARING PRESSURES:

SERVICE LOAD BEARING PRESSURES:	5000 PSF ON AGGREGATE PIER GROUND IMPROVEMENT
NET ALLOWABLE BEARING PRESSURE	5000 PSF ON AGGREGATE PIER GROUND IMPROVEMENT
- FOUNDATION ELEVATIONS SHOWN INDICATE LOCATIONS WHERE ADEQUATE SOIL BEARING PRESSURE IS ANTICIPATED. IF INADEQUATE BEARING CAPACITY IS ENCOUNTERED, CONTACT STRUCTURAL ENGINEER FOR RESOLUTION. BEARING ELEVATIONS ARE ESTIMATED FROM SOIL BORING DATA INDICATED IN THE GEOTECHNICAL REPORT. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURES SHALL BE MADE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
- ALL FOUNDATIONS SHALL BEAR BELOW THE DEEPEST FROTH, OR LOWER WHERE INDICATED ON FOUNDATION PLAN. IN CASE OF CONFLICT, NOTIFY THE DESIGN PROFESSIONALS IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
- FOUNDATIONS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL, AND CLEAN AND FREE OF LOOSE DEBRIS AND STANDING WATER AT TIME OF CONCRETE PLACEMENT.
- WHERE FOUNDATIONS BEAR ON ROCK, FOUNDATIONS SHALL BEAR ON THAT ROCK OR ON LEAN CONCRETE FILL.
- NEED FOOTING BEARING ELEVATIONS SHALL MATCH ADJACENT EXISTING FOOTING BEARING ELEVATIONS WHERE OCCURRING UON.
- THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL UON IN THE GEOTECHNICAL REPORT. CONTACT STRUCTURAL ENGINEER WHERE ADEQUATE SLOPE IS NOT ACHIEVED.

REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," UON.
- CONCRETE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

REINFORCING STEEL UON	ASTM A615, GR 60	Fy=60 KSI
WELDED REINFORCING STEEL	ASTM A706, GR 60	Fy=60 KSI
REINFORCING STEEL IN SEISMIC FORCE RESISTING SYSTEMS OTHER THAN ORDINARY (SHEAR WALLS AND MOMENT FRAMES)	ASTM A706, GR 60	Fy=60 KSI
WELDED WIRE REINFORCING	ASTM A1064	Fy=65 KSI
EPOXY-COATED REINFORCING STEEL	ASTM A775	Fy=60 KSI
GALVANIZED-COATED REINFORCING STEEL	ASTM A767	Fy=60 KSI
STEEL WIRE	ASTM A1064	Fy=60 KSI
DEFORMED BAR ANCHORS	ASTM A1064	Fy=70 KSI
HEADED DEFORMED BARS	ASTM A970	Fy=DEFORMED BAR TENSILE STRENGTH
MECHANICAL COUPLERS	TYPE 2	Fy=1.25xDEFORMED BAR TENSILE STRENGTH
HEADED STEEL STUD SHEAR REINFORCING	ASTM A1044	Fy=51 KSI
- MINIMUM CONCRETE COVER SHALL BE PROVIDED AS FOLLOWS TO THE OUTERMOST REINFORCING BARS:

CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	COVER (IN)
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 TO #18	2
		#5 AND SMALLER	1/2
		#14 & #18	1/2
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	#11 AND SMALLER	3/4
	BEAMS, COLUMNS, PENDENTS, AND TENSION TIES	PRIMARY REINF. STIRRUPS, TIES, SPIRALS, AND HOOPS	1/2
	BOUNDARY ELEMENTS	ALL	1/2
OTHER	PARKING LEVEL SLABS	TOP BARS	1/2
		BOTTOM BARS	1

- ALL TILT-UP CONCRETE WALL PANELS SHALL BE CONSTRUCTED SUCH THAT THE CONTROL OF FORM DIMENSIONS, PLACING OF REINFORCEMENT, QUALITY CONTROL OF CONCRETE, AND CURING PROCEDURES ARE EQUAL TO THOSE NORMALLY EXPECTED IN A PRECAST PLANT. MINIMUM CONCRETE COVER FOR ALL REINFORCING BARS #11 AND SMALLER SHALL BE 3/4".

- REINFORCING STEEL SHALL BE INSTALLED TO WITHIN THE FOLLOWING TOLERANCES INDICATED TOLERANCES ARE PER ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS":

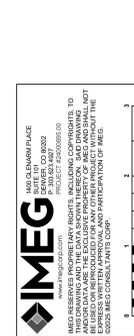
ITEM FOR WHICH TOLERANCE IS BEING MEASURED	PERMITTED TOLERANCE
CONCRETE COVER FOR SLAB TOP AND BOTTOM BARS	±1/4"
COVER FOR OTHER REINFORCING STEEL	±3/8"
SPECIFIED SPACING BETWEEN PARALLEL BARS IN SLAB	± (SPECIFIED SPACING/4) BUT NOT TO EXCEED 1"
HORIZONTAL DEVIATION FROM SPECIFIED LOCATION UON	±3"
SPACING AND LOCATION OF BEAM STIRRUPS	± (BEAM DEPTH IN INCHES/12) X 1"
SPACING AND LOCATION OF COLUMN TIES	± (MINIMUM COLUMN DIMENSION IN INCHES/12) X 1"
LOCATION OF ENDS OF BARS PERPENDICULAR TO SLAB EDGES	±1"
HORIZONTAL LOCATION OF PRESTRESSED TENDONS	±1/2" FOR MEMBER DEPTH = 24" ±1" FOR MEMBER DEPTH > 24"
VERTICAL LOCATION (DRAPE) OF PRESTRESSED TENDONS	±1/4" FOR MEMBER DEPTH = 8" ±3/8" FOR MEMBER DEPTH 8" < D = 24" ±1/2" FOR MEMBER DEPTH > 24"

- THE ABOVE LIST OF PERMITTED TOLERANCES SHALL BE PROVIDED ON ALL REINFORCING STEEL PLACING DRAWINGS AND ON ALL POST-TENSIONED TENDON PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT PROVIDE THIS LIST OF TOLERANCES WILL BE REJECTED.
- FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED UON.
- WELDING OF REINFORCING STEEL OTHER THAN A706 IS PROHIBITED. WELDING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH AWS D1.4 OR D1.8.
- HEADED STUDS AND DEFORMED BAR ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- SUPPORTS AND TIE WIRE FOR COATED REINFORCING SHALL BE PLASTIC PROTECTED. SUPPORTS AND TIE WIRE FOR STAINLESS OR GALVANIZED REINFORCING SHALL BE STAINLESS OR GALVANIZED STEEL PROTECTED RESPECTIVELY. SUPPORTS AND TIE WIRE FOR UNCOATED REINFORCING SHALL BE PLAIN WIRE, NO PROTECTION.
- ALL WELDED WIRE REINFORCING SHALL BE LAP SPICED 2 PANELS (1'-0" MIN).
- SPlicing:
 - SPICES IN REINFORCING STEEL SHALL BE MADE ONLY AT THOSE LOCATIONS WHERE SPICES ARE SHOWN ON THE STRUCTURAL DRAWINGS AND AT THOSE LOCATIONS WHERE SPICES HAVE BEEN DETAILED ON THE REINFORCING STEEL PLACING DRAWINGS THAT HAVE BEEN REVIEWED AND APPROVED BY THE CONTRACTOR. EXCEPT AS SPECIFICALLY INDICATED, ALL TENSION LAP SPICES UON.
 - MECHANICAL SPICE COUPLERS MAY BE USED INSTEAD OF TENSION LAP SPICES WHERE SPECIFIED. TENSION LAP SPICES IN ADJACENT BARS SHALL BE MINIMUM 6" MINIMUM. COMPRESSION LAP SPICES MAY BE USED ONLY AT THOSE LOCATIONS WHERE SUCH SPICES ARE SPECIFICALLY INDICATED. STAGGER SPICES WHERE REQUIRED TO PROVIDE A 1/2" MINIMUM CLEAR SPACING BETWEEN REINFORCING STEEL AT SPICE LOCATIONS.
- ALL HOOKS SHALL BE STANDARD HOOKS OR STANDARD STIRRUP HOOKS UON. STANDARD STIRRUP HOOKS SHALL HAVE CONTINUOUS BAR AT INSIDE CORNER OF HOOK.
- VERTICAL REINFORCING STEEL IN CONCRETE AND MASONRY WALLS WITH ONE LAYER OF REINFORCING BARS SHALL BE INSTALLED IN THE CENTER OF THE WALL UON.
- STANDARD STIRRUP HOOKS FOR #3, #4, AND #5 BARS SHALL BE PROVIDED IN SLABS LESS THAN 8" THICK.
- DOWELS SHALL MATCH GRADE, SIZE, SPACING, AND QUANTITY OF LAPPED REINFORCING STEEL UON. EXTEND ALL DOWELS FOR FULL DEPTH OF SUPPORTING ELEMENT AND PROVIDE HOOKS UON. DOWELS SHALL NOT BE POST-INSTALLED INTO FRESH CONCRETE.
- HEADED DEFORMED BARS MAY ONLY BE USED ON #11 AND SMALLER BARS. THREADED OR CUTTED HEADS CAN BE USED AT THE FABRICATOR'S DISCRETION.
- FIELD CUTTING OF REINFORCING STEEL IS PROHIBITED UNLESS INDICATED ON THE DRAWINGS IN THE PLACING DRAWINGS.
- HEATING OF BARS FOR BENDING IS PROHIBITED.
- PROVIDE EPOXY-COATED REINFORCING STEEL IN ALL PARKING LEVEL SLABS, PLAZA SLABS, BALCONIES, TERRACES, AND ALL OTHER SLABS EXPOSED TO WEATHER AND ON BARS ARE TO BE INSTALLED.
- ALL REINFORCING IN CONCRETE USED FOR THE CONTAINMENT OF WATER SHALL BE HOT-DIP GALVANIZED OR EPOXY-COATED.
- EPOXY COAT THE FOLLOWING IN PARKING STRUCTURES:
 - REINFORCING STEEL IN SLABS INCLUDING POUR STRIPS
 - BEAM TOP STEEL AND STIRRUPS
 - REINFORCING STEEL IN STAIRS EXPOSED TO WEATHER
 - OTHER REINFORCING STEEL AND EMBEDS AS INDICATED
- REINFORCING STEEL PLACING DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318. THE PLACING DRAWINGS SHALL SHOW ALL INFORMATION NECESSARY TO FABRICATE AND PLACE THE REINFORCING STEEL.
- FIBER REINFORCING:
 - STRUCTURAL MACRO SYNTHETIC FIBER REINFORCING SHALL COMPLY WITH ASTM C1116, TYPE II AND ASTM 07508.
 - MACRO SYNTHETIC FIBERS SHALL BE "TUF-STRAND SF" FIBERS MANUFACTURED BY THE EUCLID CHEMICAL COMPANY OR "STRUX 9040" FIBERS MANUFACTURED BY GCP.
 - PROVIDE 4 LBS OF MACRO FIBER REINFORCING PER CUBIC YARD OF CONCRETE WHERE FIBER REINFORCING IS INDICATED UON.
- REINFORCING STEEL SPACINGS ARE CENTER-TO-CENTER DIMENSIONS UON. REINFORCING STEEL SHOWN IN SECTION PERPENDICULAR TO THE CUT ARE CONTINUOUS UON.
- THE SPACING OF ALL REINFORCING STEEL MUST BE COMPUTED BY THE REINFORCING STEEL DETAILER AND MUST BE INDICATED ON THE PLACING DRAWINGS. EXTENT ARROWS MUST BE USED TO CLEARLY INDICATE THE LOCATIONS WHERE GROUPS OF REINFORCING BARS ARE TO BE INSTALLED.
- A LIST OF ALL APPLICABLE REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE INDICATED ON ALL REINFORCING STEEL PLACING DRAWINGS. PLACING DRAWINGS THAT DO NOT SHOW SUFFICIENT INFORMATION NEEDED TO PLACE THE REINFORCING STEEL BARS ARE TO BE INSTALLED.
- CONTRACTOR SHALL NOTIFY THE TESTING AND INSPECTION AGENCY AND STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ALL CONCRETE POURS IN ORDER TO PERMIT REINFORCING STEEL REVIEW IF REQUIRED BY THE STRUCTURAL ENGINEER.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE UON.
- CONCRETE MATERIALS SHALL CONFORM TO:

PORTLAND LIMESTONE CEMENT	ASTM C595, TYPE II
FLY ASH	ASTM C618, TYPE OR F
SLAG CEMENT	ASTM C989
FINE AND COARSE AGGREGATE	ASTM C33
LIGHTWEIGHT AGGREGATE	ASTM C330
WATER	POTABLE
AIR-ENTRAINING ADMIXTURE	ASTM C260
WATER REDUCING ADMIXTURE	ASTM C494



01/23/2026

3. CONCRETE STRENGTHS SHALL CONFORM TO:

COMPONENT	f _c AT 28 DAYS ¹ (PSI)	MAX PERMITTED W/C	EXPOSURE CLASS
SHALLOW FOUNDATIONS	4500	0.45	F0
PILE CAPS	4500	0.45	F2
GRADE SLABS	4500	0.45	F2
INTERIOR SLAB-ON-GRADE	4500	0.60	F0
EXTERIOR SLAB-ON-GRADE AND EXTERIOR CONCRETE	5000	0.40	F2
STRUCTURAL TOPPING SLABS	4500	0.45	F2
COLUMNS	5000	0.40	F3
SHEAR WALLS ²	5000	0.40	F3
MILD-REINFORCED SLABS AND BEAMS	5000	0.40	F3

¹IF ALTERNATE VALUES ARE INDICATED ON PLANS OR DETAILS FOR SPECIFIC CONDITIONS, THEY SHALL BE USED IN LIEU OF THOSE LISTED IN THE TABLE.

²WALLS MONOTICH WITH COLUMNS OR PIERS SHALL BE CONSTRUCTED USING CONCRETE SPECIFIED FOR THE COLUMNS WITHIN 15 FEET MINIMUM TO EACH SIDE OF THE COLUMNS.

4. AIR ENTRAINMENT:

NOMINAL MAXIMUM AGGREGATE SIZE	REQUIRED AIR CONTENT PER EXPOSURE CATEGORY	
	F1	F2
3/8"	6%	7.5%
1/2"	5.5%	7%
3/4"	5%	6%
1"	4.5%	5%

- a. CONCRETE SHALL BE AIR ENTRAINMENT WITH THE APPROPRIATE PERCENTAGE AIR CONTENT LISTED IN THE TABLE ABOVE AS APPLICABLE FOR THE INDICATED EXPOSURE CLASS AND NOMINAL MAXIMUM AGGREGATE SIZE IN THE CONCRETE MIX. THE REQUIRED AIR CONTENT VALUE MAY BE REDUCED BY 1% FOR ALL CONCRETE WITH COMPRESSIVE STRENGTH GREATER THAN 5000 PSI. THE PERMITTED TOLERANCE ON THE REQUIRED AIR CONTENT IS ±1.5%.
- b. ALL LIGHTWEIGHT CONCRETE SHALL HAVE AIR ENTRAINMENT.
- c. AIR ENTRAINMENT SHALL CONFORM TO UL RATING REQUIREMENTS FOR FIRE RESISTANCE.

5. REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE:

CONCRETE ELEMENT	REQUIRED NOMINAL MAXIMUM COARSE AGGREGATE SIZE ²
ALL CONCRETE UON	3"
VOIDED FILIGREE SLABS	1/4"
TOPPING SLABS LESS THAN 3" THICK	3/8"

¹SMALLER NOMINAL MAXIMUM COARSE AGGREGATE SIZE SHALL BE USED WHERE REQUIRED PER ACI 318.

6. COMBINED AGGREGATE GRADING FOR STRUCTURAL SLABS: 8-22% BY WEIGHT OF AGGREGATE SHALL BE RETAINED ON EACH SIEVE BELOW THE MAXIMUM AGGREGATE SIZE SIEVE AND ABOVE THE #10 SIEVE.

7. ALL FOUNDATION ELEMENTS SHALL BE CENTERED UNDER WALLS, PIERS, OR COLUMNS

8. "ROUGH JOINTS" ARE JOINTS ROUGHENED TO AN AMPLITUDE OF 1/4" AND FREE AND CLEAR OF LAFTANCE. PROVIDE ROUGH JOINTS AT ALL CONSTRUCTION JOINTS UON.

9. CONTRACTOR SHALL SUBMIT PROPOSED JOINT LOCATIONS FOR ALL CONSTRUCTION JOINTS WHERE JOINTS ARE NOT INDICATED ON THE DRAWINGS.

10. CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL PLACING DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS UON. ALL REINFORCING TO BE CONTINUOUS THROUGH JOINTS UON.

11. HORIZONTAL CONSTRUCTION JOINTS THROUGH CAST-IN-PLACE CONCRETE FRAMING ARE NOT PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS.

12. PROVIDE TEMPLATES TO SET EMBEDDED ITEMS

13. INSTALLATION OF STRUCTURAL CABLE, CONDUIT, AND PIPING IN OR THROUGH CONCRETE COLUMNS AND WALLS IS PROHIBITED UNLESS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF PIPING IN CAST-IN-PLACE CONCRETE IS PROHIBITED UNLESS APPROVED BY STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING PROPOSED PLACEMENT OF ELECTRICAL CABLE AND CONDUIT IN SLABS. THOSE DRAWINGS SHALL SHOW SIZES AND DIMENSIONED LOCATIONS OF ALL CABLE AND CONDUIT.

14. PROVIDE CONTINUOUS BENTONITE WATERSTOPPS IN ALL CONSTRUCTION JOINTS IN BELOW GRADE CONCRETE CONSTRUCTION. COORDINATE WATERSTOPPS WITH ARCHITECTURAL DRAWINGS.

15. PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UON ON ARCHITECTURAL DRAWINGS.

16. SLOPE SLABS TO DRAINS. SEE ARCHITECTURAL AND MEP DRAWINGS FOR DRAIN LOCATIONS AND SLOPE REQUIREMENTS. SLAB THICKNESSES SHOWN ON DRAWINGS ARE MINIMUMS.

17. NO LOADS SHALL BE PLACED ON STRUCTURAL CONCRETE SLABS ON DECK WITHIN 7 DAYS AFTER CONCRETE IS PLACED.

18. AFTER CONCRETE IS PLACED, IN NO CASE SHALL THE SUPERIMPOSED CONSTRUCTION LOADS BE GREATER THAN SPECIFIED DESIGN LIVE LOADS UNLESS THE WORK IS SHORED.

19. NOTIFY THE ARCHITECT 48 HOURS MINIMUM PRIOR TO ALL POURS.

20. CONTRACTOR SHALL SURVEY ALL CONCRETE WORK WITHIN 48 HOURS OF PLACING CONCRETE TO ENSURE PLACEMENT IS IN ACCORDANCE WITH PROJECT REQUIREMENTS.

21. ALL FORMWORK, SHORING, AND RESHORING SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER LICENSED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BE SIGNED AND SEALED.

22. CONCRETE FILL THICKNESS SHOWN ON FRAMING PLANS AND DETAIL SHEETS IS MINIMUM THICKNESS. PROVIDE ALLOWANCES FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR BEAM OR DECK DEFLECTIONS AND TO MAINTAIN SURFACE TOLERANCES SPECIFIED.

23. CURING OF CONCRETE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER. SUBMIT LOCATIONS OF PROPOSED CONCRETE CORES.

24. REINFORCING STEEL SHALL NOT BE DAMAGED WHEN DRILLING CONCRETE.

25. ADHERE TO ACI 308R AND ACI 308R FOR HOT AND COLD WEATHER CONCRETE CONSTRUCTION.

26. THE PROPOSED MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE TESTING AND INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S. SUBMIT TEST DATA ON EACH PROPOSED MIX FOR REVIEW IN ACCORDANCE WITH THE APPLICABLE CODE. MIX DESIGNS SUBMITTED WITHOUT THE REQUIRED TEST DATA WILL BE RETURNED WITHOUT REVIEW.

27. CONTRACTOR SHALL SUBMIT A SINGLE DIMENSIONED AND COORDINATED DRAWING FOR EACH LEVEL SHOWING THE LOCATIONS OF THE FOLLOWING:

- a. SLAB OPENINGS AND PENETRATIONS
- b. SLEEVES, CAST-IN-PLACE AND POST-INSTALLED FIELD CORED
- c. SLAB-EMBEDDED ELECTRICAL CABLE AND CONDUIT
- d. EMBEDDED PLATES AND ALL OTHER EMBEDDED ITEMS
- e. POST-TENSIONED TENDONS AND STRESSING ANCHORS

28. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, LOCATIONS, AND DETAILS OF ALL ARCHITECTURAL FEATURES IN THE CONCRETE. SEE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR REQUIREMENTS FOR ALL CONCRETE FINISHES.

MASONRY

1. CMU CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TMS 402/602 "BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES".

2. MINIMUM 28-DAY COMPRESSIVE STRENGTHS FOR CMU CONSTRUCTION SHALL BE:

DESIGN ASSEMBLY STRENGTH, f _m	2000 PSI
INDIVIDUAL CONCRETE MASONRY UNITS	2000 PSI
GROUT	2000 PSI

3. CMU MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90, NORMAL-WEIGHT UON
MORTAR	ASTM C270, TYPE S UON
GROUT	ASTM C270, TYPE M (NON-STRUCTURAL MASONRY)
JOINT REINFORCING	ASTM A82

4. WIRE REINFORCING PER ASTM A63 FOR SINGLE-WYTHE CMU WALLS, CMU CAVITY WALLS, AND MULTI-WYTHE COMPOSITE CMU WALLS SHALL BE HOT-DIP GALVANIZED PER ASTM A153. CORROSION RESISTANT HORIZONTAL LADDER-TYPE JOINT REINFORCING WITH THE FOLLOWING GAUGE AND VERTICAL SPACING:

BELOW GRADE WALLS	9GA @ 16" OC (ALL WIDTHS)
OTHER THAN RUNNING BOND	9GA @ 8" OC
BELOW THAN RUNNING BOND	9GA @ 16" OC (6"-8" WIDTHS) 9GA @ 8" OC (10"-16" WIDTHS)

5. ALL LOAD BEARING CMU WALLS TO HAVE FULL MORTAR BED, HEAD, AND COLLAR JOINTS. GROUT SOLID ALL JAMBS FULL HEIGHT IN LOAD BEARING CMU WALLS TO UNDERSIDE OF STEEL LITEIL PLUS ONE CELL BEYOND BEARING LENGTH.

6. PROVIDE MINIMUM 1" GROUT BETWEEN MAIN REINFORCING AND/OR BOLTS AND CMU UNIT FACE. VERTICAL REINFORCEMENT SHALL BE CENTERED IN WALL UON. VERTICAL REINFORCING BARS SHALL BE SECURELY HELD IN POSITION BY WIRE TIES OR OTHER APPROVED MEANS TO ENSURE DESIGN LOCATION AND LAP. PLACE BARS AND LAP PRIOR TO GROUTING.

7. HORIZONTAL BOND BEAM AND VERTICAL REINFORCING SHALL BE CONTINUOUS UON. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWEL SIZE AND LOCATION IN FOOTINGS SHALL BE SET TO ALIGN WITH VERTICAL REINFORCING STEEL WITHIN 6" TOLERANCE. VERTICAL REINFORCEMENT TO RUN FULL HEIGHT OF WALL UON.

8. ALL CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.

9. VERTICAL REINFORCEMENT TO RUN FULL HEIGHT OF WALL UON.

10. GROUT SOLID ALL COURSES BELOW GRADE.

11. LIFTS OF GROUT SHALL BE KEVED 1 1/2" INTO THE PREVIOUS COURSE BELOW.

12. HORIZONTAL BAR REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.

13. ALL BOND BEAMS TO HAVE A MINIMUM 8" DEPTH. PROVIDE TALLER BOND BEAMS AS NEEDED FOR COURSING OR TO AVOID INTERFERENCE BETWEEN REINFORCING STEEL AND POST-INSTALLED ANCHORS. CUT AND STEP BOND BEAM AS REQUIRED.

14. PROVIDE HORIZONTAL TIES WHERE CMU ABUTS CONCRETE.

15. COORDINATE ANY UNIDENTIFIED PIPE OR DUCT PASSING THROUGH STRUCTURAL CMU WALLS WITH TYPICAL DETAILS UON. ADDITIONAL LIMITS MAY BE REQUIRED. COORDINATE WITH STRUCTURAL ENGINEER FOR REQUIRED LITEIL SIZE BEFORE CONSTRUCTION OF CMU WALL.

16. PIPE AND CONDUIT SHALL NOT BE PERMITTED IN CELLS WITH VERTICAL REINFORCEMENT. CONDUIT TO BE LOCATED TO AVOID ALL HORIZONTAL REINFORCEMENT. NO ALUMINUM CONDUITS PERMITTED.

17. SEE ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN, AND JOINT TYPE. ALL BLOCK SHALL BE LAID IN RUNNING BOND UON.

18. SEE ARCHITECTURAL DRAWINGS FOR OTHER WALL ASSEMBLY COMPONENTS.

19. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF ALL NON-LOAD BEARING CMU WALLS.

20. MINIMUM WALL VERTICAL REINFORCING SHALL BE #5 BAR FULL HEIGHT IN CENTER OF GROUTED CELL AT WALL INTERSECTIONS, CORNERS, WALL ENDS, JAMBS AT WALL OPENINGS, EACH SIDE OF CONTROL JOINTS, AND AT INTERVALS NOT TO EXCEED 48" UON.

21. MINIMUM HORIZONTAL REINFORCING SHALL BE #25 BARS IN CENTER OF MINIMUM 16" DEEP CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR, INTERMEDIATE STAR LANDINGS, AND ROOF DECK. PROVIDE 1/8" BAR IN CENTER OF 8" DEEP CONTINUOUS GROUTED BOND BEAM TO TOP OF PARAPET OR FREE-STANDING WALL AND AT INTERVALS NOT TO EXCEED 48" UON. PLACE BARS AT ELEVATED FLOOR AND ROOF LINES CONTINUOUS THROUGH CONTROL JOINTS.

22. MINIMUM HORIZONTAL REINFORCING SHALL BE #25 BARS IN CENTER OF MINIMUM 16" DEEP CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR, INTERMEDIATE STAR LANDINGS, AND ROOF DECK. PROVIDE 1/8" BAR IN CENTER OF 8" DEEP CONTINUOUS GROUTED BOND BEAM TO TOP OF PARAPET OR FREE-STANDING WALL AND AT INTERVALS NOT TO EXCEED 48" UON. PLACE BARS AT ELEVATED FLOOR AND ROOF LINES CONTINUOUS THROUGH CONTROL JOINTS.

INTELS

1. PROVIDE INTELS OVER ALL OPENINGS AND RECESSES IN MASONRY CONSTRUCTION UNLESS ALTERNATE REINFORCEMENT IS SPECIFIED. PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILL WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.

2. SHOP CONNECTIONS SHALL BE WELDED UON. WELDS INDICATED WITH A WELD WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS.

3. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES FOR WELDERS" OF THE AMERICAN WELDS SOCIETY.

4. HEADED STUD ANCHORS (HSA) SHALL BE INSTALLED IN ACCORDANCE WITH AISC D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"Ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"Ø.

5. MINIMUM HORIZONTAL CONCRETE COVER FOR HSA TO BE 2".

6. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS, WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.

7. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED UNLESS PERMITTED BY THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.

8. CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.

9. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT EQUIVALENT TO OR GREATER THAN THE SPECIFIED FRAMING. SUCH PROPOSED SUBSTITUTIONS ARE PERMITTED ONLY IF APPROVED IN WRITING BY THE DESIGN PROFESSIONALS.

10. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW.

ANGLE SHAPES	ASTM A572	Fy=50 KSI
HSS SECTIONS, SQ/RECT	ASTM A500, GR C	Fy=50 KSI
PLATES	ASTM A572	Fy=50 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy=55 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fu=150 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F1852	Fu=150 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS FOR HIGH STRENGTH BOLTS	ASTM A436	
HEADED STUD ANCHORS (HSA)	ASTM A108, TYPE B	
WELDING	AWS D1.1, 70KSI FILLER METAL	

11. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.

12. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.

13. FULLY TENSIONED HIGH STRENGTH BOLTS AND SLR CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.

14. DESIGNED STRUCTURAL STEEL CONNECTIONS:

- a. ALL STRUCTURAL STEEL CONNECTIONS AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH AISC 303, OPTION 1.

7. DELEGATED STRUCTURAL STEEL CONNECTIONS:

- a. ALL STRUCTURAL STEEL CONNECTIONS (OTHER THAN THOSE CONNECTIONS IDENTIFIED AS "FULLY DESIGNED") AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER WORKING FOR THE FABRICATOR IN ACCORDANCE WITH AISC 303, OPTION 3. THAT ENGINEER SHALL BE LICENSED IN THE JURISDICTION IN WHICH THE PROJECT IS LOCATED.

- b. CONNECTIONS AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE REACTIONS SPECIFIED OR INDICATED ON THE DRAWINGS.

- c. WHERE SPECIFIC CONNECTION TYPES, DETAILS, CONFIGURATIONS, OR CONNECTION DESIGN LIMITATIONS ARE INDICATED, THE CONNECTIONS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THOSE REQUIREMENTS, WHERE SPECIFIC TYPES, QUANTITIES AND DIMENSIONS OF BOLTS, WELDS, AND PLATES ARE INDICATED, THOSE ARE MINIMUM PERMITTED SIZES, QUANTITIES, AND DIMENSIONS. THE CONNECTION STRENGTH OF ALL CONNECTIONS SHALL BE DETERMINED BY THE FABRICATOR'S CONNECTION DESIGN ENGINEER, AND THE CONNECTION DETAIL SHALL BE MODIFIED IF REQUIRED TO PROVIDE THE REQUIRED STRENGTH.

- d. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE CALCULATION OF MEMBER STRENGTH AT CONNECTIONS CONSIDERING THE EFFECTS OF COPEES, BOLT HOLES, CONNECTION ECCENTRICITY, AND CONNECTION GEOMETRY AND SHALL CONSIDER ALLOWABLE LIMIT STATES INCLUDING BUT NOT LIMITED TO REVIEW OF GROSS SHEAR, NET SHEAR, BLOCK SHEAR, WEB TEAR-OUT, BEARING, FLEXURAL STRENGTH, LOCAL BUCKLING, TENSILE STRENGTH THROUGH BOTH THE NET AND GROSS SECTIONS, COMPRESSIVE STRENGTH, AND DISTORTION. DESIGN OF CONNECTIONS SHALL BE IN ACCORDANCE WITH RECOGNIZED PUBLISHED METHODS SUCH AS THOSE PUBLISHED IN THE AISC "ENGINEERING JOURNAL", THE AISC 15TH EDITION STEEL CONSTRUCTION MANUAL, AND THE AISC STEEL CONSTRUCTION MANUAL DESIGN EXAMPLES. CONNECTION DESIGN SHALL CONSIDER TRANSFER FORCES THROUGH CONNECTED AND CONNECTING MEMBERS. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE ANALYSIS AND DESIGN OF PLATES, BRACKETS, STRUTS, STIFFENER PLATES, GUSSET PLATES, AND OTHER ELEMENTS TO TRANSFER FORCES INTO AND BETWEEN MEMBERS. CALCULATIONS SHALL SHOW FULL DESIGN CODE EQUATIONS AND METHODOLOGY FOR A REPRESENTATIVE SAMPLE OF EACH CONNECTION TYPE.

- e. AT ENGINEER OF RECORD'S REQUEST, MANUFACTURER'S CALCULATIONS SHALL BE SUBMITTED FOR EACH CONNECTION TYPE TO VERIFY THAT CONNECTIONS DESIGNED USING COMPUTER SOFTWARE CONSIDER ALL LIMIT STATES AND PRODUCE RESULTS IDENTICAL TO THE MANUAL CALCULATIONS.

- f. ALL BOLTED BEAM SHEAR CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS. ALL BEAM SHEAR CONNECTIONS SHALL BE DETAILED SO THAT THE LENGTH OF THE CONNECTION IS GREATER THAN OR EQUAL TO 50% OF THE "T" DIMENSION OF THE SUPPORTED MEMBER.

- g. BEAM SHEAR CONNECTIONS SHALL BE DESIGNED AS SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LRFD REACTIONS, EXCEPT WHERE INDICATED AS FULLY DESIGNED ON THE CONTRACT DOCUMENTS.

- h. CONNECTIONS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF 15 KIPS, WHERE LOADS ARE NOT PROVIDED ON CONTRACT DOCUMENTS, CONNECTIONS SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR NON-COMPOSITE BEAMS, FOR COMPOSITE BEAMS, CONNECTIONS SHALL SUPPORT 80% OF THE TOTAL UNIFORM LOAD CAPACITY.

- i. MOMENT CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE LRFD MOMENTS INDICATED ON THE DRAWINGS, WHERE NO MOMENT REACTION IS INDICATED, THE CONNECTION SHALL BE DESIGNED TO SUPPORT 75% OF THE FULL PLASTIC MOMENT STRENGTH OF THE MEMBER. MOMENT CONNECTIONS SHALL BE DESIGNED AS FULLY RESTRAINED MOMENT CONNECTIONS.

- j. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILL WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.

- k. SHOP CONNECTIONS SHALL BE WELDED UON. WELDS INDICATED WITH A WELD WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS.

- l. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES FOR WELDERS" OF THE AMERICAN WELDS SOCIETY.

- m. HEADED STUD ANCHORS (HSA) SHALL BE INSTALLED IN ACCORDANCE WITH AISC D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"Ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"Ø.

- n. MINIMUM HORIZONTAL CONCRETE COVER FOR HSA TO BE 2".

- o. BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE DRAWINGS, WHERE NO UPWARD CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.

- p. SPLICING OF STEEL MEMBERS WHERE NOT DETAILED ON THE DRAWINGS IS PROHIBITED UNLESS PERMITTED BY THE STRUCTURAL ENGINEER AS TO LOCATION, TYPE OF SPLICE, AND CONNECTION TO BE MADE.

- q. CUTS, HOLES, OPENINGS, ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS. BURNING OR TORCHING OF HOLES, CUTS, AND OTHER FIELD MODIFICATIONS SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.

- r. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC. FOR MISCELLANEOUS STEEL NOT EQUIVALENT TO OR GREATER THAN THE SPECIFIED FRAMING. SUCH PROPOSED SUBSTITUTIONS ARE PERMITTED ONLY IF APPROVED IN WRITING BY THE DESIGN PROFESSIONALS.

- s. STRUCTURAL STEEL SHALL CONFORM TO ASTM STANDARDS AS NOTED BELOW.

ANGLE SHAPES	ASTM A572	Fy=50 KSI
HSS SECTIONS, SQ/RECT	ASTM A500, GR C	Fy=50 KSI
PLATES	ASTM A572	Fy=50 KSI
ANCHOR RODS	ASTM F1554, GR 36	Fy=55 KSI
HIGH STRENGTH BOLTS	ASTM F3125, GR A325	Fu=150 KSI
HIGH STRENGTH TWIST-OFF BOLTS	ASTM F3125, GR F1852	Fu=150 KSI
HEAVY HEX NUTS	ASTM A563	
WASHERS FOR HIGH STRENGTH BOLTS	ASTM A436	
HEADED STUD ANCHORS (HSA)	ASTM A108, TYPE B	
WELDING	AWS D1.1, 70KSI FILLER METAL	

11. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS". SEE DETAILS FOR BOLT SIZE AND MATERIAL ASTM DESIGNATION.

12. ALL BOLTED CONNECTIONS SHALL BE GRADE A325N BEARING TYPE BOLTS UON. ALL BOLTS SHALL BE INSTALLED TO A MINIMUM SNUG TIGHT CONDITION UON.

13. FULLY TENSIONED HIGH STRENGTH BOLTS AND SLR CRITICAL HIGH STRENGTH BOLTS SHALL USE TENSION-CONTROL "TWIST-OFF" BOLTS OR BE INSTALLED USING THE TURN OF THE NUT METHOD.

14. DESIGNED STRUCTURAL STEEL CONNECTIONS:

- a. ALL STRUCTURAL STEEL CONNECTIONS AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH AISC 303, OPTION 1.

- b. CONNECTIONS AND MEMBER REINFORCEMENT AT THE CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE REACTIONS SPECIFIED OR INDICATED ON THE DRAWINGS.

- c. WHERE SPECIFIC CONNECTION TYPES, DETAILS, CONFIGURATIONS, OR CONNECTION DESIGN LIMITATIONS ARE INDICATED, THE CONNECTIONS SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THOSE REQUIREMENTS, WHERE SPECIFIC TYPES, QUANTITIES AND DIMENSIONS OF BOLTS, WELDS, AND PLATES ARE INDICATED, THOSE ARE MINIMUM PERMITTED SIZES, QUANTITIES, AND DIMENSIONS. THE CONNECTION STRENGTH OF ALL CONNECTIONS SHALL BE DETERMINED BY THE FABRICATOR'S CONNECTION DESIGN ENGINEER, AND THE CONNECTION DETAIL SHALL BE MODIFIED IF REQUIRED TO PROVIDE THE REQUIRED STRENGTH.

- d. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE CALCULATION OF MEMBER STRENGTH AT CONNECTIONS CONSIDERING THE EFFECTS OF COPEES, BOLT HOLES, CONNECTION ECCENTRICITY, AND CONNECTION GEOMETRY AND SHALL CONSIDER ALLOWABLE LIMIT STATES INCLUDING BUT NOT LIMITED TO REVIEW OF GROSS SHEAR, NET SHEAR, BLOCK SHEAR, WEB TEAR-OUT, BEARING, FLEXURAL STRENGTH, LOCAL BUCKLING, TENSILE STRENGTH THROUGH BOTH THE NET AND GROSS SECTIONS, COMPRESSIVE STRENGTH, AND DISTORTION. DESIGN OF CONNECTIONS SHALL BE IN ACCORDANCE WITH RECOGNIZED PUBLISHED METHODS SUCH AS THOSE PUBLISHED IN THE AISC "ENGINEERING JOURNAL", THE AISC 15TH EDITION STEEL CONSTRUCTION MANUAL, AND THE AISC STEEL CONSTRUCTION MANUAL DESIGN EXAMPLES. CONNECTION DESIGN SHALL CONSIDER TRANSFER FORCES THROUGH CONNECTED AND CONNECTING MEMBERS. CONNECTION DESIGN RESPONSIBILITY SHALL INCLUDE ANALYSIS AND DESIGN OF PLATES, BRACKETS, STRUTS, STIFFENER PLATES, GUSSET PLATES, AND OTHER ELEMENTS TO TRANSFER FORCES INTO AND BETWEEN MEMBERS. CALCULATIONS SHALL SHOW FULL DESIGN CODE EQUATIONS AND METHODOLOGY FOR A REPRESENTATIVE SAMPLE OF EACH CONNECTION TYPE.

- e. AT ENGINEER OF RECORD'S REQUEST, MANUFACTURER'S CALCULATIONS SHALL BE SUBMITTED FOR EACH CONNECTION TYPE TO VERIFY THAT CONNECTIONS DESIGNED USING COMPUTER SOFTWARE CONSIDER ALL LIMIT STATES AND PRODUCE RESULTS IDENTICAL TO THE MANUAL CALCULATIONS.

- f. ALL BOLTED BEAM SHEAR CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS. ALL BEAM SHEAR CONNECTIONS SHALL BE DETAILED SO THAT THE LENGTH OF THE CONNECTION IS GREATER THAN OR EQUAL TO 50% OF THE "T" DIMENSION OF THE SUPPORTED MEMBER.

- g. BEAM SHEAR CONNECTIONS SHALL BE DESIGNED AS SIMPLE SHEAR CONNECTIONS PER AISC 360 PART 10 TO SUPPORT LRFD REACTIONS, EXCEPT WHERE INDICATED AS FULLY DESIGNED ON THE CONTRACT DOCUMENTS.

- h. CONNECTIONS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF 15 KIPS, WHERE LOADS ARE NOT PROVIDED ON CONTRACT DOCUMENTS, CONNECTIONS SHALL SUPPORT 60% OF THE TOTAL UNIFORM LOAD CAPACITY FOR NON-COMPOSITE BEAMS, FOR COMPOSITE BEAMS, CONNECTIONS SHALL SUPPORT 80% OF THE TOTAL UNIFORM LOAD CAPACITY.

- i. MOMENT CONNECTIONS SHALL BE DESIGNED TO SUPPORT THE LRFD MOMENTS INDICATED ON THE DRAWINGS, WHERE NO MOMENT REACTION IS INDICATED, THE CONNECTION SHALL BE DESIGNED TO SUPPORT 75% OF THE FULL PLASTIC MOMENT STRENGTH OF THE MEMBER. MOMENT CONNECTIONS SHALL BE DESIGNED AS FULLY RESTRAINED MOMENT CONNECTIONS.

- j. WELD LENGTHS INDICATED ON THE DRAWINGS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE WELD LENGTH IS NOT SPECIFIED, PROVIDE WELD ALONG ENTIRE INTERSECTION OF THE JOINED PARTS. WHERE FILL WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM WELD SIZE AS SPECIFIED IN AISC 360, TABLE J2.4.

- k. SHOP CONNECTIONS SHALL BE WELDED UON. WELDS INDICATED WITH A WELD WELD SYMBOL MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. LOCATIONS OF ALL FIELD WELDS SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS.

- l. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED BY CERTIFIED WELDERS WITH EXPERIENCE AND CERTIFICATION IN THE TYPES OF WELDING INDICATED. WELDERS SHALL HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN "QUALIFICATION PROCEDURES FOR WELDERS" OF THE AMERICAN WELDS SOCIETY.

- m. HEADED STUD ANCHORS (HSA) SHALL BE INSTALLED IN ACCORDANCE WITH AISC D1.1 AND SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE HSA AND THE STEEL SHAPE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE HSA AND THE STEEL SHAPE. THE HSA SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8"Ø AND SMALLER AND 3/16" FOR LARGER THAN 5/8"Ø.

- n. MINIMUM HORIZONTAL CONCRETE COVER FOR HSA TO BE 2".

FIRE-RETARDANT TREATED (FRT) LUMBER

- SEE ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS REQUIRING FRT DIMENSIONAL LUMBER.
- NO FIRE TREATED LUMBER TO BE INCISED. NO REDUCTION DUE TO INCISING HAS BEEN CONSIDERED.
- THE REDUCTION FACTORS USED FOR DESIGN ASSUME FRT LUMBER SUPPLIED BY PYROGUARD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING PRIOR TO SUBMITTING A BID THAT THE ASSUMED FRT LUMBER'S STRENGTH REDUCTION FACTORS BELOW MEET THE REQUIREMENTS OF THE SUBMITTED FIRE-RETARDANT TREATMENT TO BE USED. ANY REVISIONS TO FRAMING MEMBERS AFTER BIDDING DUE TO FAILURE TO VERIFY THESE VALUES SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

FIRE-RETARDANT TREATED LUMBER STRENGTH FACTORS

DESIGN PROPERTY	REDUCTION IN VALUE (WALL / FLOOR)	REDUCTION IN VALUE (ROOF)
Fb	0.97	0.93
Ft	0.95	0.87
Fv	0.96	0.95
Fc perp	0.95	0.95
Fc parallel	1.00	0.98
E	0.96	0.96
FASTENERS	0.90	0.90

- NOTE: THE REDUCTION VALUES ABOVE ARE FOR DOUGLAS FIR IN CLIMATE ZONE 1B. FIRE-RETARDANT TREATMENT PER AWPA U1 STANDARD. USE CATEGORY UCFA FOR INTERIOR LUMBER PROTECTED FROM MOISTURE. FRT SILL PLATES PER UC2. SUBJECT TO MOISTURE. FRT SILL PLATES SHALL ALSO BE IDENTIFIED AS EXTERIOR PER IRC 2303.2.6.
- FRT LUMBER TO BE LABELED WITH THE MARK OF THE APPROVAL AGENCY, TREATING MANUFACTURER, SPECIES OF WOOD, FLAME SPREAD AND SMOKE-DEVELOPED INDEX, AND METHOD OF DRYING PER THE APPLICABLE BUILDING CODE.
 - CUTTING FRT LUMBER TO LENGTH AND TYPICAL UTILITY HOLE DRILLING IS ALLOWED. NO FIELD TREATMENT OR PAINTING OF FRT LUMBER TO BE REQUIRED. DO NOT MILL, RESURFACE, OR RIP (CUT ALONG LENGTH) FRT LUMBER.
 - ALL FASTENERS INSTALLED IN FRT WOOD SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.

HEAVY TIMBER

- ALL HEAVY TIMBER FRAMING SHALL BE DOUGLAS FIR-LARCH, GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION. NOTED ALLOWABLE STRESSES ARE MINIMUMS AND FOR NONREPETITIVE USES PRIOR TO ALLOWABLE STRESS INCREASES AND CONFORMING TO THE NDS AS FOLLOWS:
 - ALL TIMBER 8" THICK > 5' AND WIDER AND SHALL BE DRY SERVICE CONDITION WITH MOISTURE CONTENT LESS THAN 16% (RF-KD) RADIO FREQUENCY KILN DRIED
- | | |
|---|---------------|
| BENDING STRENGTH, Fb | 1350 PSI |
| SHEAR STRENGTH, Fv | 170 PSI |
| AXIAL STRENGTH, Fc | 925 PSI |
| COMPRESSION PERPENDICULAR TO GRAIN, Fc perp | 625 PSI |
| MODULUS OF ELASTICITY, E | 1,600,000 PSI |

POST-INSTALLED ANCHORS

- BASIS OF DESIGN ANCHORS:

INSTALLATION CONDITION	ANCHOR TYPE
EXPANSION ANCHORS INTO CONCRETE	HILTI KWIK BOLT TZZ (ESR-4266)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE	HILTI KWIK HUS-EZ (ESR-3027)
ADHESIVE ANCHORS INTO CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HIT-Z ROD (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 AND HAS-E THREADED ROD (ESR-4968) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 AND HAS-E THREADED ROD (ESR-3814)
EXPANSION ANCHORS INTO GROUDED CMU	HILTI KWIK TZZ (ESR-4561)
SCREW ANCHORS > 1/4"Ø INTO GROUDED CMU	HILTI KWIK HUS-EZ (ESR-3056)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE OR GROUDED CMU	HILTI KWIK-CON II
ADHESIVE ANCHORS IN GROUDED CMU OR SOLID BRICK	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD (ESR-4143)
ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS	HILTI HIT-HY 270 SYSTEM w/ HAS-E THREADED ROD AND APPROPRIATE SCREEN TUBE (ESR-4144)
ADHESIVE DOWELING FOR ANCHORING REINFORCING BARS INTO (E) CONCRETE	HILTI SAFE-SET SYSTEM w/ HIT-HY 200 V3 ADHESIVE (ESR-4868) or HILTI SAFE-SET SYSTEM w/ HIT-RE 500 V3 ADHESIVE (ESR-3814)
POWDER-ACTUATED FASTENERS (PAF)'S IN CONCRETE	HILTI X-U FASTENERS (ESR-2269)
- BASIS OF DESIGN ANCHORS:

INSTALLATION CONDITION	ANCHOR TYPE
EXPANSION ANCHORS INTO CONCRETE	SIMPSON STRONG-BOLT Z (ESR-3037)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE	SIMPSON TITEN HD (ESR-2713)
ADHESIVE ANCHORS INTO CONCRETE, NEW AND EXISTING	SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4057)
EXPANSION ANCHORS INTO GROUDED CMU	SIMPSON STRONG-BOLT Z (APMO UES ER-240)
SCREW ANCHORS > 1/4"Ø INTO GROUDED CMU	SIMPSON TITEN HD (ESR-1056)
SCREW ANCHORS > 1/4"Ø INTO CONCRETE OR GROUDED CMU	SIMPSON TITEN TURBO (CONCRETE: APMO UES ER-172) (MASONRY: APMO UES ER-716)
ADHESIVE ANCHORS IN GROUDED CMU OR SOLID BRICK	SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4844)
ADHESIVE ANCHORS INTO HOLLOW CMU, BRICK OR MULTI-WYTHE BRICK WALLS	SIMPSON SET-3G w/ GR55 THREADED ROD (ESR-4844)
POWDER-ACTUATED FASTENERS (PAF)'S IN CONCRETE	SIMPSON PDPA (ESR-2138)
- ALTERNATIVE ANCHORS MAY BE USED IF APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT'S JURISDICTION VERIFYING PROPOSED ALTERNATIVE ANCHORS WILL PROVIDE THE SAME OR GREATER LOAD-CARRYING CAPACITY AS THE SPECIFIED ANCHORS. THE CONTRACTOR SHALL SUBMIT EVALUATION REPORTS. EACH ANCHOR CONFIGURATION SHALL BE EVALUATED AND COMPARED TO THE SPECIFIED ANCHOR.
- CRACKED CONCRETE IS ASSUMED FOR ALL ANCHORAGE DESIGN CONDITIONS UNLESS IT CAN BE DEMONSTRATED THROUGH ENGINEERING ANALYSIS THAT THE CONCRETE REMAINS UNCRACKED DURING THE GOVERNING ULTIMATE LOAD STATE.
- POST-INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE INSTALLATION TRAINING FOR EACH SPECIFIED ANCHOR TYPE. THE STRUCTURAL ENGINEER SHALL RECEIVE DOCUMENTATION VERIFYING ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS HAVE BEEN TRAINED PRIOR TO COMMENCEMENT OF INSTALLING ANCHORS.
- INSTALLATION OF ADHESIVE ANCHORS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPROVED CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM OR EQUIVALENT. THE ACCEPTABILITY OF CERTIFICATIONS OTHER THAN THE ACI/CRSI ADHESIVE INSTALLER CERTIFICATION WILL BE DETERMINED BY THE STRUCTURAL ENGINEER.

- CONCRETE SHALL HAVE ACHIEVED DESIGN STRENGTH PRIOR TO INSTALLING POST-INSTALLED ANCHORS. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE THAT HAS CURED FOR A MINIMUM OF 21 DAYS.
- ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ANCHORS AND PROXIMITY OF ANCHORS TO EDGES OF CONCRETE OR MASONRY. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- POST-INSTALLED ANCHORS AND DOWELS SHALL BE INSTALLED IN A MANNER THAT DOES NOT DAMAGE REINFORCING STEEL. CONJUGATE OR OTHER EMBEDDED ITEMS. REINFORCING STEEL SHALL BE LOCATED BY NON-DESTRUCTIVE MEANS PRIOR TO DRILLING HOLES. PLATES AND BRACKETS THROUGH WHICH ANCHORS WILL BE INSTALLED SHALL NOT BE FABRICATED UNTIL AFTER REINFORCING STEEL IS LOCATED. ANCHOR LOCATIONS ARE ADJUSTED. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER TO OBTAIN ALTERNATIVE ANCHOR LAYOUT WHERE ANCHORS MUST BE RELOCATED TO AVOID INTERFERENCE WITH REINFORCING STEEL.
- ADHESIVE ANCHORING SYSTEMS ARE PERMITTED TO BE USED FOR INSTALLATION OF REINFORCING STEEL INTO EXISTING CONCRETE ONLY WHERE SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS OR WITH APPROVAL FROM THE STRUCTURAL ENGINEER. LOCATIONS WHERE REINFORCING STEEL WAS INCORRECTLY PLACED OR MISSED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- WHERE POST-INSTALLED MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE SPECIFIED, THOSE DEPTHS ARE THE REQUIRED MINIMUM NOMINAL EMBEDMENT DEPTHS. WHERE MECHANICAL ANCHOR EMBEDMENT DEPTHS ARE NOT INDICATED, THE ANCHORS SHALL BE INSTALLED TO THE MAXIMUM EMBEDMENT DEPTH NOTED IN THE MANUFACTURER'S PRODUCT TECHNICAL GUIDE.
- ADHESIVE ANCHORS SHALL BE INSTALLED WITH A MINIMUM 6" EMBEDMENT DEPTH UNO.
- ANCHORS SHALL BE QUALIFIED FOR USE IN CRACKED CONCRETE UNDER EARTHQUAKE LOADING IN ACCORDANCE WITH ACI 308.2 (MECHANICAL ANCHORS) OR ACI 308.4 (ADHESIVE OR EPOXY ANCHORS).
- QUALIFICATION OF ANCHORS SHALL INCLUDE THE TESTING AND EVALUATION OF ANCHORS BY AN INDEPENDENT TESTING AND EVALUATION AGENCY ACCREDITED UNDER ISO/IEC 17025 CONFORMING TO IF ISO/IEC 17011. THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) SHALL SERVE AS THE DEFAULT TESTING AND INSPECTION AGENCY UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
- THE ICC EVALUATION SERVICE REPORT (ESR) SHALL BE IN CONFORMANCE WITH THE ICC-ES CRITERIA AS INDICATED.
- ANCHORAGE OF NONSTRUCTURAL DESIGNATED SEISMIC SYSTEMS WITH SEISMIC QUALIFICATIONS IN ACCORDANCE WITH ASCE 7 SECTION 2.2 SHALL CONFORM TO THE CERTIFICATE OF COMPLIANCE FOR THE DESIGNATED SYSTEM.

ADHESIVE ANCHORS

- INTENDED FOR USE WITH ANCHOR RODS, DOWELS, AND REINFORCING BARS.
- CHEMICAL ANCHOR SYSTEMS:
 - CONCRETE: USE ONLY ADHESIVE ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC ESR IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC308. ANCHOR SYSTEMS SHOULD BE APPROVED FOR USE IN CRACKED CONCRETE AND SEISMIC DESIGN CATEGORIES A-F PER SECTION 2.0 OF THE ICC ESR. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC ESR FOR THE SPECIFIC ANCHOR AND AS REQUIRED BY THE MANUFACTURER.
 - GROUT-FILLED CMU UNITS: USE ONLY ADHESIVE ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC ESR IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC308 AND HAVE PASSED OPTIONAL CREEP TESTS DESCRIBED IN SECTION 4.4.3 OF AC308. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC ESR FOR THE SPECIFIC ANCHOR AND AS REQUIRED BY THE MANUFACTURER.
 - ANCHORS AND DOWELS INSTALLED INTO HOLLOW CMU UNITS AND UNREINFORCED BRICK MASONRY: USE SCREENS AS SPECIFIED BY THE MANUFACTURER. EMBEDMENT DEPTH FOR ANCHORS SHALL BE PER THE APPLICABLE ICC ESR.
- ANCHOR RODS SHALL BE OF STRENGTH AS SPECIFIED IN THE STEEL NOTES AND ANSI B18.22.1 TYPE A WASHERS UNO. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS SHALL USE ASTM A563 GRADE D4 HEAVY HEX NUTS AND ASTM F436 WASHERS.
- DOWELS AND REINFORCEMENT BARS SHALL BE OF STRENGTH AS SPECIFIED IN THE REINFORCING NOTES.
- REMOVE GREASE, OIL, RUST, AND ANY OTHER LAITANCE FROM RODS AND DOWELS PRIOR TO INSTALLATION.
- TESTING AND INSPECTION REQUIREMENTS WILL BE DICTATED BY SECTION 4.0 OF THE ICC ESR. ANY TESTING AND INSPECTION SHALL VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS, ANCHOR SPACINGS, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.
- THE TENSION TESTING OF THE CHEMICAL ANCHORS SHALL BE DONE IN THE PRESENCE OF THE TESTING AND INSPECTION AGENCY, AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION TESTING REQUIREMENTS, THE ADDITIONAL TESTING REQUEMETS SHALL BE ACCEPTABLE TO THE ENFORCEMENT AGENCY.
- TEST QUANTITY OF ANCHORS AS FOLLOWS:

APPLICATION	QUANTITY
STRUCTURAL	100%
NON-STRUCTURAL	50%
SILL PLATE BOLTING	10%

- ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE TESTING AND INSPECTION AGENCY.
- WHERE ADHESIVE ANCHOR SYSTEMS ARE USED TO INSTALL REINFORCING DOWEL BARS IN HARDENED CONCRETE, ONLY 25% OF THE DOWELS NEED BE TESTED IF THE FOLLOWING CONDITIONS ARE MET:
 - THE DOWELS ARE USED EXCLUSIVELY TO TRANSMIT SHEAR FORCES ACROSS JOINTS BETWEEN EXISTING AND NEW CONCRETE.
 - THE NUMBER OF DOWELS IN ANY ONE MEMBER EQUALS OR EXCEEDS 12.
 - THE DOWELS ARE UNIFORMLY DISTRIBUTED ACROSS SEISMIC FORCE RESISTING MEMBERS, SUCH AS SHEAR WALLS, COLLECTORS, AND DIAPHRAGMS.
- TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLABS-ON-GRADE WHERE THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM IS NOT REQUIRED.
- REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED WITHIN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
- A HYDRAULIC CYLINDER SHALL BE USED TO APPLY THE TENSION TEST LOAD TO THE ANCHOR WITH THE CYLINDER SUPPORTED ON A LOADING PLATE HAVING A HOLE DIAMETER EQUAL TO 1.5 TO 2.0 TIMES THE ANCHOR HOLE DIAMETER (CONFINED CONFIGURATION) UNLESS OTHERWISE APPROVED BY THE ENFORCEMENT AGENCY.
- THE FOLLOWING CRITERIA APPLIES FOR THE ACCEPTANCE OF INSTALLED ANCHORS USING THE HYDRAULIC RAM METHOD: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD.
- IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
- ALL HOLES FOR POST-INSTALLED ANCHORS SHALL BE DRILLED, CLEANED, AND PREPARED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE APPLICABLE ICC ESR, WHERE AN ANCHOR DOES NOT SET PROPERLY, OR FAILS A TENSION TEST, OR REINFORCEMENT IS ENCOUNTERED DURING DRILLING, THE DRILLED HOLE MAY NOT BE REUSED, ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT. THE MINIMUM SPACING BETWEEN AN ABANDONED HOLE AND A DRILLED HOLE USED FOR A POST-INSTALLED ANCHOR SHALL NOT BE LESS THAN 1.5 ANCHOR DIAMETERS UNLESS OTHERWISE APPROVED BY THE ENFORCEMENT AGENCY. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE STRUCTURAL ENGINEER WILL DETERMINE A NEW LOCATION.
- LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATE MEMBERS OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.
- REQUIRED TEST LOADS SHALL BE DETERMINED AS THE LESSER OF TWICE THE MAXIMUM ALLOWABLE TENSION LOAD PROVIDED IN THE ICC ESR FOR THE SPECIFIC ANCHOR OR 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT.

EPOXY ANCHORS

- INTENDED FOR USE WITH REINFORCING BARS AND THREADED RODS.
- ALL EPOXY SHALL BE SET-3G AS MANUFACTURED BY SIMPSON STRONG-TIE (ICC ESR-4057) UNO OR APPROVED EQUIVALENT.
- WORKERS SHALL BE CERTIFIED FOR ANCHOR INSTALLATION EQUIPMENT AND PROCEDURES USING THEIR EPOXY.
- CONTINUOUS INSPECTION IS REQUIRED FOR INSTALLATION OF REBAR OR THREADED RODS.
- FOR REQUIRED HOLES, THE DIAMETERS SHALL BE PER MANUFACTURER'S REQUIREMENTS. MINIMUM HOLE LENGTH SHALL BE PER STRUCTURAL DRAWINGS OR PER THE ICC MINIMUM (FOR MAXIMUM TENSION) IF NOT SHOWN.
- FOR HORIZONTAL HOLES COMPLETELY THROUGH WALLS OR BEAMS AND FOR TIES AROUND COLUMNS, PROVE A DAM AT ONE END, FLOOD WITH EPOXY AND DAM THE OTHER SIDE. VIBRATE TIES TO ENSURE FULL COVERAGE. REMOVE DAMS ONCE FLUID EPOXY HAS SET. FILL ANY VOIDS WITH ADDITIONAL EPOXY.
- ALL EPOXY ANCHORS WILL BE TESTED AS FOLLOWS:
 - 25% OF FIRST 40 ANCHORS INSTALLED AND 10% OF ALL ANCHORS THEREAFTER.
 - IF ANY FAILURES OCCUR, THE PREVIOUS 10 ANCHORS INSTALLED SHALL BE TESTED AS WELL AS THE NEXT 10 ANCHORS INSTALLED. NEW INSTALLED ANCHORS WILL CONTINUE TO BE TESTED UNTIL 5 SUCCESSIVE ANCHORS PASS, AT WHICH TIME NORMAL TESTING OF THE REMAINING ANCHORS SHALL RESUME.
 - ANCHORS SHALL BE ALLOWED TO CURE 48 HOURS PRIOR TO TESTING.
 - TENSION TEST SHALL BE IN ACCORDANCE WITH ASTM E488.
 - A MINIMUM OF TWO DOWELS PER WALL PER FLOOR SHALL BE TESTED.
 - IF ANCHOR EDGE DISTANCE IS LESS THAN 4 ANCHOR DIAMETERS, USE 1/2 THE TEST VALUE SHOWN UNO.

- ALL ANCHORS TO BE TESTED AS FOLLOWS:

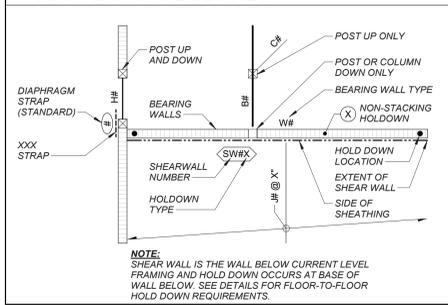
ANCHOR TYPE	TEST TYPE	TEST LOAD (LBS)	BASE MATERIAL
5/8"Ø A307 THREADED ROD	TENSION	6,000	CONCRETE
3/4"Ø A307 THREADED ROD	TENSION	8,500	CONCRETE
7/8"Ø A307 THREADED ROD	TENSION	11,500	CONCRETE
1"Ø A307 THREADED ROD	TENSION	15,000	CONCRETE
#4 REBAR	TENSION	4,800	CONCRETE
#5 REBAR	TENSION	7,500	CONCRETE
#6 REBAR	TENSION	10,500	CONCRETE

- WHEN INSTALLING DRILLED-IN EPOXY BARS OR ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

ELEVATORS

- THE ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS ARE DEFERRED SUBMITTAL ITEMS.
- INSTALLATION OF ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS SHALL NOT BE STARTED UNTIL DETAILED PLANS AND ENGINEERING CALCULATIONS HAVE BEEN SUBMITTED FOR REVIEW AND APPROVAL BY THE DESIGN PROFESSIONALS AND DSA HCAI.
- PROVISION FOR ELEVATORS, ASSOCIATED EQUIPMENT, GUIDE RAILS, AND BRACKETS HAS BEEN INCLUDED IN THE DESIGN OF THE STRUCTURE.

WOOD PLAN SYMBOLS KEY



STRUCTURAL ABBREVIATION KEY			
ABBR:	DESCRIPTION:	ABBR:	DESCRIPTION:
#	NUMBER OR POUNDS	KSF	KIPS PER SQUARE FOOT
@	DEGREE	KSI	KIPS PER SQUARE INCH
∅	DIAMETER	L	LENGTH
(E)	ANCHOR HOLE	LLS	POUNDS
A.B.	ARCHITECT - URE, -URAL	LLC	LONG LEG HORIZONTAL
B	BOTTOM OF	LLT	LONG LEG VERTICAL
B.F.	BRACE FRAME	LONG.	LONGITUDINAL
B.W.	BEAM	LSH	LONG SIDE HORIZONTAL
BF	BEARING WALL	LSV	LONG SIDE VERTICAL
B.N.	BOTTOM NAILING	LWT	LIGHTWEIGHT
B.T.W.	BETWEEN	MAX	MAXIMUM
C.F.	CENTERLINE	MECH	MECHANICAL
CMU	CONCRETE MASONRY UNIT	MANUF	MANUFACTURER
COL	COLUMN	MIN	MINIMUM
CONN	CONNECTION	NIC	NOT IN CONTRACT
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS	OSB	ORIENTED STRAND BOARD
COORD	COORDINATION	PCF	POUNDS PER CUBIC FOOT
DIA	DIAMETER	P.H.	PENTHOUSE
DL	DEAD LOAD	PJP	PARTIAL JOINT PENETRATION WELD
DWG	DRAWING	PL	PLATE
DWL	DOWEL	PLF	POUNDS PER LINEAR FOOT
EA	EACH FACE	PSF	POUNDS PER SQUARE FOOT
EF	EFFECTIVE	PSI	POUNDS PER SQUARE INCH
EFF	ELEVATION	PT	POST-TENSION, -ED, -ING
ELEC	ELECTRICAL	R	RADIUS
EMBED	EMBEDDED	REINF	REINFORCING, -MENT, -ED
E.N.	EDGE NAILING	REQD	REQUIRED
EOD	EDGE OF DECK	RFT	ROOF TOP UNIT
EOS	EDGE OF SLAB	SCHED	SCHEDULE
EQ	EQUAL	SFRS	SEISMIC FORCE-RESISTING SYSTEM
EQUIP	EQUIPMENT	SM	SIMILAR
ETC	ETCETERA	SNOW	SNOW LOAD
EW	EACH WAY	S.M.S.	SHEET METAL SCREW
EXP	EXPANSION	SP	SPACE(S)
EXT	EXTERIOR	SPECS	SPECIFICATION(S)
FDN	FOUNDATION	SO	SQUARE
FN	FIELD NAILING	STIFF	STIFFENER
FT	FOOT	STL	STEEL
FTG	FOOTING	SYM	SYMMETRICAL
FV	FIELD VERTICAL	T&B	TOP AND BOTTOM
GA	GAGE OR GAUGE	TOP OF	TOP OF
GLV	GALVANIZED	TC	PRE-TENSIONED BOLT
GLB	GRID BEAM	TEMP	TEMPERATURE
GLD	GRID	TYP	TYPICAL
GRD	GRID TRUSS	THK	THICK
HORIZ	HORIZONTAL	TRANS	TRANSVERSE
HSA	HEADED STUD ANCHOR	TR	TRUSS
HSS	HIGH STRENGTH BOLT	UN	UNLESS OTHERWISE NOTED
JT	JOINT	VERT	VERTICAL
K, KIP	KILOPOUND (1,000 POUNDS)	VF	VERIFY IN FIELD
		W	WITH
		WP	WORK POINT
		WT	WEIGHT
		WWR	WELDED WIRE REINFORCING

FOUNDATION SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
◻	SLAB DEPRESSION	
---	STEP IN FOOTING	

CONCRETE SYMBOLS:

SYMBOL	DESCRIPTION	DETAIL REFERENCE
← RAMP UP →	RAMP (DIRECTION)	N/A
////	RAMP DOWN	
////	RAMP UP	
////	SLAB CURB WALL	
////	SLAB DROP	
////	SLAB FOLD	
////	SLAB THICKNESS CHANGE	
////	SLAB/BEAM	
////	SLOPING SLAB DROP	

MATERIAL LEGEND

MATERIAL LEGEND:	
◻	CONCRETE
◻	CONCRETE - EXISTING
◻	EARTH
◻	GRAVEL OR GRANULAR FILL
◻	GROUT OR DRYPAK OR SAND
◻	CMU OR MASONRY
◻	METAL / COLD-FORM STUD
◻	WOOD / STUD
◻	PRECAST CONCRETE
◻	STEEL
◻	OTHER/SPECIALTY

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME
S0.00	GENERAL NOTES
S0.01	GENERAL NOTES
S0.02	GENERAL NOTES
S0.03	TESTING AND INSPECTION
S0.04	TESTING AND INSPECTION
S0.05	SCHEDULES
S0.10	LOADING PLANS
S2.01	LEVEL 01 FOUNDATION PLAN
S2.02	ART MEZZANINE FRAMING PLAN
S2.03	LEVEL 02 FRAMING PLAN
S2.03R	LEVEL 02 REINFORCING PLAN
S2.04	LEVEL 03 FRAMING PLAN
S2.05	LEVEL 04 FRAMING PLAN
S2.06	LEVEL 05 FRAMING PLAN
S2.07	LEVEL 06 FRAMING PLAN
S2.08	ROOF FRAMING PLAN
S3.00	TYPICAL FOUNDATION DETAILS
S3.01	TYPICAL FOUNDATION DETAILS
S3.02	TYPICAL FOUNDATION DETAILS
S3.03	FOUNDATION SECTIONS
S3.10	TYPICAL CONCRETE SECTIONS
S3.11	TYPICAL CONCRETE SECTIONS
S3.12	CONCRETE FRAMING SECTIONS
S6.00	TYPICAL WOOD SECTIONS AND SCHEDULES
S6.01	WOOD FLOOR FRAMING DETAILS
S6.02	WOOD FRAMING DETAILS
S6.03	WOOD FRAMING DETAILS
S6.10	TYPICAL WOOD LATERAL SECTIONS
S6.11	SHEAR WALL SCHEDULE / WOOD LATERAL SECTIONS
S6.20	ROOF SECTION
S6.21	ROOF SECTION
S6.22	ROOF SECTION
GRAND TOTAL: 31	



TERMINAL
GRAND JUNCTION,
CO

REV:
DRAWN: TM_AA
REVIEWED: AP
DATE: 01/30/26
PROJECT #: 24000895.00
SHEET TITLE:
GENERAL NOTES

SCALE: As Indicated

NO. S0.02

GENERAL

- THE STRUCTURAL ENGINEER DOES NOT PROVIDE INSPECTIONS OF CONSTRUCTION. STRUCTURAL ENGINEER MAY MAKE PERIODIC OBSERVATIONS OF THE CONSTRUCTION. SUCH OBSERVATIONS SHALL NOT REPLACE REQUIRED INSPECTIONS BY THE GOVERNING AUTHORITIES OR SERVE AS "SPECIAL INSPECTIONS" AS MAY BE REQUIRED BY CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
- SEE ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS OR SPECIFICATIONS FOR TESTING AND INSPECTION REQUIREMENTS OF NON-STRUCTURAL COMPONENTS.
- DUTIES OF THE INSPECTION AGENCY PER IBC CHAPTER 17:
 - SUBMIT A PROPOSED TESTING AND INSPECTION PROGRAM TO THE OWNER, THE ARCHITECT AND THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
 - PERFORM ALL TESTING AND INSPECTION REQUIRED PER APPROVED TESTING AND INSPECTION PROGRAM.
 - FURNISH INSPECTION REPORT TO THE BUILDING OFFICIAL, THE OWNER, THE ARCHITECT, STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR. THE REPORTS SHALL BE COMPLETED AND FURNISHED WITHIN 48 HOURS OF INSPECTED WORK.
 - SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTION AGENCY'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- SPECIAL INSPECTIONS AND TESTS ARE REQUIRED FOR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN CHAPTER 17 OF THE IBC OR IN STANDARDS REFERENCED BY THE IBC. THESE ITEMS INCLUDE:
 - POST-INSTALLED ANCHORS - INSPECTION
- THE FOLLOWING WORK SHALL BE INSPECTED BY THE SPECIAL INSPECTOR UNLESS SPECIFICALLY WAIVED BY THE BUILDING OFFICIAL.

CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	MATERIAL STD REFERENCE	IBC REFERENCE
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	-	X	ACI 318: CH 20, 25.2, 25.3, 26.6, 1-26.6.3	-
REINFORCING BAR WELDING:			AWS D1.4 ACI 318: 26.6.4	
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X	-	-
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	X	-	-
c. INSPECTS ALL OTHER WELDS	X	-	-	-
INSPECT ANCHORS CAST IN CONCRETE	-	X	ACI 318: 17.8.2	-
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X	-	ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE	-	X	ACI 318: 17.8.2	-
VERIFY USE OF REQUIRED DESIGN MIX	-	X	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	ASTM C172, ASTM C31, ACI 318: 26.5, 26.12	-
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	-	ACI 318: 26.5	-
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	X	ACI 318: 26.5.3-26.5.5	-
INSPECT PRESTRESSED CONCRETE FOR:				
a. APPLICATION OF PRESTRESSING FORCES; AND	X	-	ACI 318: 26.10	-
b. GROUING OF BONDED PRESTRESSING TENDONS	X	-	ACI 318: 26.10	-
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS	-	X	ACI 318: 26.9	-
FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SDC C, D, E, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:			ACI 318: 26.13.1.3	
a. INSTALLATION OF THE EMBEDDED PARTS	X	-	-	-
b. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS	X	-	ACI 550.5	-
c. COMPLETION OF CONNECTIONS IN THE FIELD	X	-	-	-
INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5	-	X	ACI 318: 26.13.1.3	-
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	-	X	ACI 318: 26.11.2	-
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	-	X	ACI 318: 26.11.1.2(b)	-

MASONRY CONSTRUCTION - LEVEL 2

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	TMS 402	TMS 602
PRIOR TO CONSTRUCTION:				
a. VERIFICATION OF COMPLIANCE OF SUBMITTALS	X	-	-	ART. 1.5
b. VERIFICATION OF CM	X	-	-	ART. 1.4 B
AS CONSTRUCTION BEGINS, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR	-	X	-	ART. 2.1, 2.6 A & 2.6 C
b. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	ART. 2.4 B & 2.4 H
c. GRADE, TYPE, AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	-	X	-	ART. 3.4 & 3.6 A
d. PRESTRESSING TECHNIQUE	-	X	-	ART. 3.6 B
e. SAMPLE PANEL CONSTRUCTION	-	X	-	ART. 1.6 D
PRIOR TO GROUING, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE	-	X	-	ART. 3.2 D & 3.2 F
b. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	-	X	SEC. 10.8 & 10.9	ART. 2.4 & 3.6
c. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	-	X	SEC. 6.1, 6.3.1, 6.3.6 & 6.3.7	ART. 3.2 E & 3.4
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	-	X	-	ART. 2.6 B & 2.4 G.1b
DURING CONSTRUCTION:				
a. VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE	X	-	-	ART. 1.5 & 1.6.3
b. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	-	X	-	ART. 1.5
c. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	-	X	-	ART. 3.3 B
d. SIZE AND LOCATION OF STRUCTURAL MEMBERS	-	X	-	ART. 3.3 F
e. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	-	X	SEC. 1.2.1(e), 6.2.1 & 6.3.1	-
f. WELDING OF REINFORCEMENT	X	-	SEC. 6.1.6.1.2	-
g. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90° F)	-	X	-	ART. 1.8 C & 1.8 D
h. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X	-	-	ART. 3.6 B
i. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X	-	-	ART. 3.5 & 3.6 C
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS	-	X	-	ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.3 & 1.4 B.4

STRUCTURAL STEEL - INSPECTION TASKS PRIOR TO BOLTING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	RCSC SECTIONS
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	TABLE N5.6-1	2.1, 9.1
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	TABLE N5.6-1	FIG. C-2.1, 9.1
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)	O	O	TABLE N5.6-1	2.3.2, 2.7.2, 9.1
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	TABLE N5.6-1	4, 8
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	TABLE N5.6-1	3, 9.1, 9.3
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	TABLE N5.6-1	7, 9.2
PROTECTION STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O	TABLE N5.6-1	2.2, 8, 9.1

2. O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS DURING BOLTING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	RCSC SECTIONS
FASTENER ASSEMBLIES PLACED IN ALL HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O	7.1(1), 8.1, 9.1
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	8.1, 9.1 N5.6-2
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	8.2, 9.2 N5.6-2
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	8.2, 9.2 N5.6-2

STRUCTURAL STEEL - INSPECTION TASKS AFTER BOLTING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	RCSC SECTIONS
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	TABLE N5.6-3

STRUCTURAL STEEL - INSPECTION TASKS PRIOR TO WELDING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	AWS D1.1 CLAUSES
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O	TABLE N5.4-1
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	P	6.38LE N5.4-1
MANUFACTURER CERTIFICATES FOR WELDING CONSUMABLES AVAILABLE	P	P	6.28LE N5.4-1
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	6.28LE N5.4-1
WELDER IDENTIFICATION	O	O	6.4 (WELDER QUALIFICATION)
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			
a. JOINT PREPARATIONS	O	O	6.5.2.E N5.4-1
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	O	O	5.22LE N5.4-1
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O	5.14LE N5.4-1
d. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	5.17LE N5.4-1
e. BACKING TYPE AND FIT (IF APPLICABLE)	O	O	5.9, 5.21.1.1-1
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- & K- JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)			
a. JOINT PREPARATIONS	P	O	9.11.2E N5.4-1
b. DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	P	O	9.11.2E N5.4-1
c. CLEANLINESS (CONDITION OF STEEL SURFACES)	P	O	9.11.2E N5.4-1
d. TACKING (TACK WELD QUALITY AND LOCATION)	P	O	9.11.2E N5.4-1
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	6.5.2, 5.16 (amp; SEE AISC 360 SECT. J1.6)
FIT-UP OF FILLET WELDS			
a. DIMENSIONS (ALIGNMENT, GAPS AT ROOT)	O	O	5.21.1E N5.4-1
b. CLEANLINESS (CONDITION OF STEEL SURFACES)	O	O	5.14LE N5.4-1
c. TACKING (TACK WELD QUALITY AND LOCATION)	O	O	5.17LE N5.4-1
CHECK WELDING EQUIPMENT	O	-	6.2, 5.10.5.4-1

2. O=OBSERVE AND P=PERFORM

STRUCTURAL STEEL - INSPECTION TASKS DURING WELDING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	AWS D1.1 CLAUSES
USE OF QUALIFIED WELDERS	O	O	6.48LE C-N5.4-2
CONTROL AND HANDLING OF WELDING CONSUMABLES	O	O	6.28LE N5.4-2
a. PACKAGING	O	O	5.3.1.E N5.4-2
b. EXPOSURE CONTROL	O	O	5.3.2 (FOR SMAW), 5.3.3 (FOR SAW)
NO WELDING OVER CRACKED TACK WELDS	O	O	5.17LE N5.4-2
ENVIRONMENTAL CONDITIONS			
a. WIND SPEED WITHIN LIMITS	O	O	5.11.1E N5.4-2
b. PRECIPITATION AND TEMPERATURE	O	O	5.11.2E N5.4-2
WPS FOLLOWED			
a. SETTINGS ON WELDING EQUIPMENT	O	O	TABLE N5.4-2
b. TRAVEL SPEED	O	O	TABLE N5.4-2
c. SELECTED WELDING MATERIALS	O	O	TABLE N5.4-2
d. SHIELDING GAS TYPE/FLOW RATE	O	O	TABLE N5.4-2
e. PREHEAT APPLIED	O	O	5.6, 5.7 N5.4-2
f. INTERPASS TEMPERATURE MAINTAINED (MIN/MAX)	O	O	TABLE N5.4-2
g. PROPER POSITION (F, V, H, OH)	O	O	TABLE N5.4-2
WELDING TECHNIQUES			
a. INTERPASS AND FINAL CLEANING	O	O	5.29.1E N5.4-2
b. EACH PASS WITHIN PROFILE LIMITATIONS	O	O	TABLE N5.4-2
c. EACH PASS MEETS QUALITY REQUIREMENTS	O	O	TABLE N5.4-2
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P	TABLE N5.4-2

2. O=OBSERVE AND P=PERFORM



STRUCTURAL STEEL - INSPECTION TASKS AFTER WELDING (AS A MINIMUM)

VERIFICATION AND INSPECTION TASK	QC	QA	AISC 360	AWS D1.1 CLAUSES
WELDS CLEANED	O	O	TABLE N5.4-3	5.29.1
SIZE, LENGTH, AND LOCATION OF WELDS	P	P	TABLE N5.4-3	6.5.1
WELDS MEET VISUAL ACCEPTANCE CRITERIA			TABLE N5.4-3	6.5.3
a. CRACK PROHIBITION	P	P	TABLE N5.4-3	TABLE 6.1(1)
b. WELD/BASE-METAL FUSION	P	P	TABLE N5.4-3	TABLE 6.1(2)
c. CRATER CROSS-SECTION	P	P	TABLE N5.4-3	TABLE 6.1(3)
d. WELD PROFILES	P	P	TABLE N5.4-3	TABLE 6.1(4), 5.24
e. WELD SIZE	P	P	TABLE N5.4-3	TABLE 6.1(6)
f. UNDERCUT	P	P	TABLE N5.4-3	TABLE 6.1(7)
g. POROSITY	P	P	TABLE N5.4-3	TABLE 6.1(8)
ARC STRIKES	P	P	TABLE N5.4-3	5.28
k-AREA1	P	P	TABLE N5.4-3	-
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES2	P	P	TABLE N5.4-3	5.16, 6.5.2 (& SEE AISC 360 SECT. J1.6)
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	TABLE N5.4-3	5.9, 5.30
REPAIR ACTIVITIES	P	P	TABLE N5.4-3	6.5.3, 5.25
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	TABLE N5.4-3	6.5.4, 6.5.5
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O	TABLE N5.4-3	-

2. O=OBSERVE AND P=PERFORM

3. 1. WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3" OF THE WELD. THE VISUAL INSPECTION SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING.

2. AFTER ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.

WOOD FRAMING

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	IBC REFERENCE
PREFABRICATED WOOD STRUCTURAL ELEMENTS	-	X	1704.2.5
INSTALLATION OF PERMANENT RESTRAINT/BRACING FOR METAL-PLATE-CONNECTED WOOD TRUSS INDIVIDUAL MEMBERS SPANNING 60 FEET OR GREATER	-	X	1705.5.2
TEMPORARY INSTALLATION RESTRAINT/BRACING FOR METAL-PLATE-CONNECTED WOOD TRUSSES SPANNING 60 FEET OR GREATER	-	X	1705.5.2
HIGH-LOAD DIAPHRAGMS:			
a. SHEATHING GRADE AND THICKNESS	X	-	1705.5.1
b. MEMBER SIZES AT ADJOINING PANEL EDGES	X	-	1705.5.1
c. DIAPHRAGM NAILING (SIZE, LENGTH, QUANTITY, AND SPACING)	X	-	1705.5.1
LATERAL FORCE RESISTING SYSTEM (SHEAR WALLS, DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLD-DOWNS, WHERE FASTENER SPACING AT PANEL EDGES IS 4" OR LESS):			
a. FIELD GLUING OF ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM	X	-	1705.11.1, 1705.12.2
b. NAILING, BOLTING, ANCHORING, AND OTHER FASTENING TO OTHER ELEMENTS OF THE LATERAL FORCE RESISTING SYSTEM	-	X	1705.11.1, 1705.12.2

MASS TIMBER

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
INSPECTION OF ANCHOR AND CONNECTIONS OF MASS TIMBER CONSTRUCTION TO TIMBER DEEP FOUNDATION SYSTEMS	-	X
INSPECT ERECTION OF MASS TIMBER CONSTRUCTION	-	X
INSPECTION OF CONNECTIONS WHERE INSTALLATION METHODS ARE REQUIRED TO MEET DESIGN LOADS:		
a. THREADED FASTENERS:		
i. VERIFY USE OF PROPER INSTALLATION EQUIPMENT	-	X
ii. VERIFY USE OF PRE-DRILLED HOLES WHERE REQUIRED	-	X
iii. INSPECT SCREWS, INCLUDING DIAMETER, LENGTH, HEAD TYPE, SPACING, INSTALLATION ANGLE, AND DEPTH	-	X
b. ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATION TO RESIST SUSTAINED TENSION LOADS	X	-
c. ADHESIVE ANCHORS NOT DEFINED IN PRECEDING CELL	-	X
d. BOLTED CONNECTIONS	-	X
e. CONCEALED CONNECTIONS	-	X

SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	-	X
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X
PERFORM CLASSIFICATIONS AND TESTING OF COMPACTED FILL MATERIAL	-	X
DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	-	X

HELICAL PILE FOUNDATIONS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
CONTINUOUS INSPECTIONS SHALL BE PERFORMED DURING INSTALLATION OF HELICAL PILE FOUNDATIONS AND SHALL INCLUDE EQUIPMENT USED, PILE DIMENSIONS, TIP ELEVATIONS, FINAL DEPTH, FINAL INSTALLATION TORQUE, AND OTHER PERTINENT INSTALLATION DATA	X	-



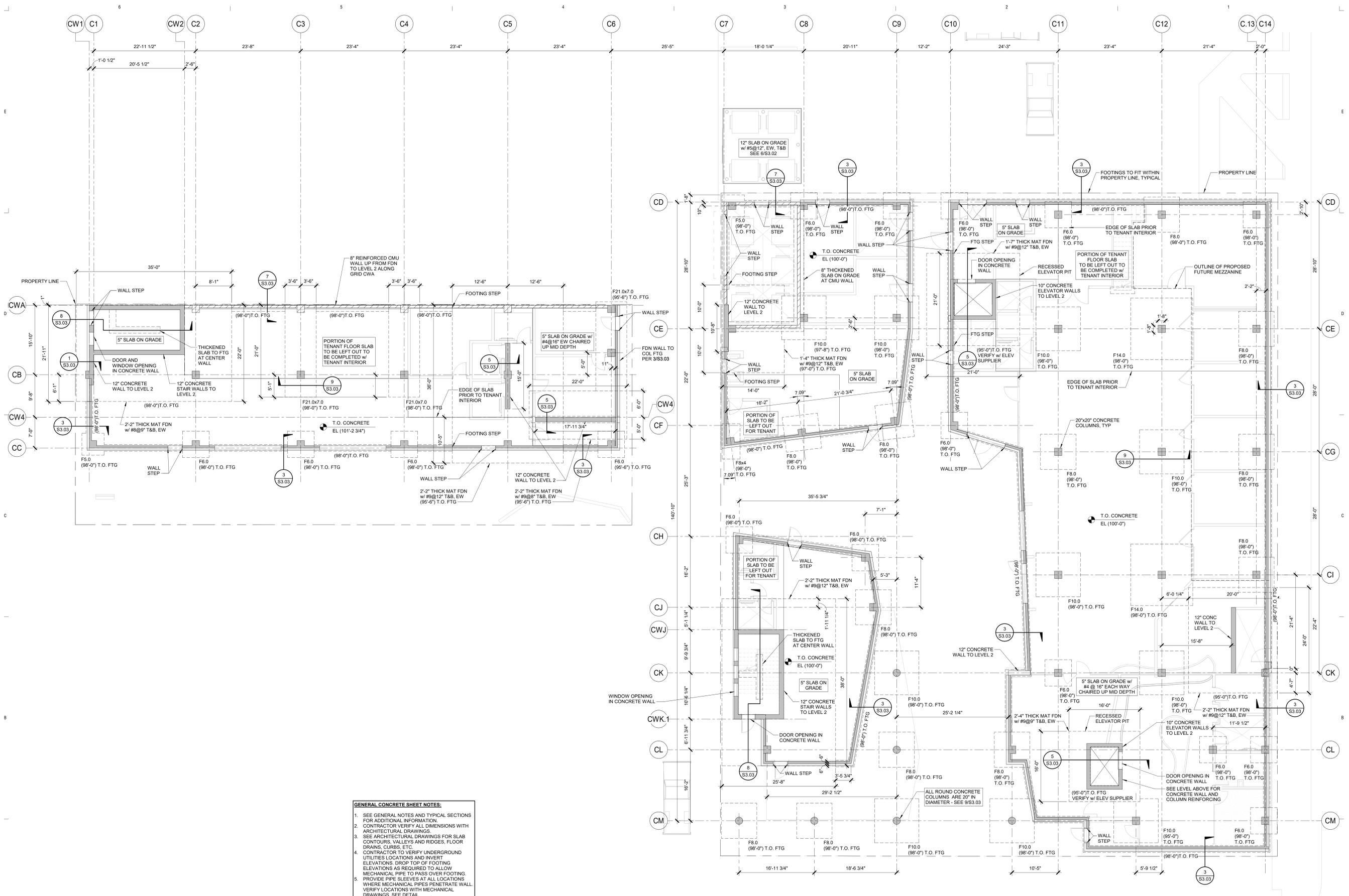
TERMINAL
 GRAND JUNCTION,
 CO

REV:

DRAWN: TM AA
 REVIEWED: AP
 DATE: 01/30/26
 PERMIT SET
 PROJECT #: 24000695.00
 FILE:
 SHEET TITLE:
TESTING AND INSPECTION

SCALE:

NO. **S0.04**



GENERAL CONCRETE SHEET NOTES:

- SEE GENERAL NOTES AND TYPICAL SECTIONS FOR ADDITIONAL INFORMATION.
- CONTRACTOR VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR SLAB CONTOURS, VALLEYS AND RIDGES, FLOOR DRAINS, CURBS, ETC.
- CONTRACTOR TO VERIFY UNDERGROUND UTILITIES LOCATIONS AND INVERT ELEVATIONS. DROP TOP OF FOOTING ELEVATIONS AS REQUIRED TO ALLOW MECHANICAL PIPE TO PASS OVER FOOTING.
- PROVIDE PIPE SLEEVES AT ALL LOCATIONS WHERE MECHANICAL PIPES PENETRATE WALL. VERIFY LOCATIONS WITH MECHANICAL DRAWINGS. SEE DETAIL.

FOUNDATION NOTES:

- DATUM ELEVATION 100'-0" EQUALS LEVEL 1 FLOOR SHEATHING OR TOP OF CONCRETE SLAB ELEVATION. SEE CIVIL FOR USGS DATUM.
- ALL SLAB-ON-GRADES ARE 5" THICK W/ #4 @ 10" EACH WAY UN.
- CONTRACTOR TO COORDINATE ALL DIMENSIONS AND DETAILS WITH ARCHITECTURAL DRAWINGS.
- GENERAL CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS LISTED IN SOILS REPORT.
- ALL CONCRETE WALLS ARE 8" THICK, UN.
- ALL SITE WALLS NOT SHOWN ON THIS PLAN SHALL BE BUILT PER ARCHITECTURAL LANDSCAPE PLANS, DETAILS, AND ELEVATIONS. SITE WALLS SHALL NOT BE CONNECTED TO THE BUILDING UNLESS NOTED OTHERWISE.
- FOR ALL LOAD BEARING WALLS AND NON-LOAD BEARING WALLS, SEE SECTION

SPREAD FOOTING SCHEDULE

MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT (EW BOT, UN)	REMARKS
F5.0	5'-0"	5'-0"	1'-0"	(6)#5 EW	
F6.0	6'-0"	6'-0"	1'-2"	(6)#5 EW	
F8.0	8'-0"	8'-0"	1'-7"	(6)#7 EW	
F8x4	8'-0"	4'-0"	1'-7"	(6)#7 EW	
F10.0	10'-0"	10'-0"	2'-0"	(9)#7 EW	
F14.0	14'-0"	14'-0"	2'-7"	(11)#9 EW	
F21.0x7.0	21'-0"	7'-0"	1'-7"	#9@12" EW T&B	

LEVEL 01 FOUNDATION PLAN
1/8" = 1'-0"
SEE SHEET S3.03 FOR FOUNDATION SECTIONS
SEE ARCHITECTURAL FOUNDATION CONTROL PLAN SHEET A2.00 FOR ADDITIONAL FOUNDATION DIMENSION INFORMATION

CLASS B TENSION LAP SPLICE LENGTH											
REINF STEEL Fy	BAR SIZE	BAR LOCATION	CONCRETE STRENGTH, Fc								
			3 KSI	4 KSI	5 KSI	6 KSI	7 KSI	8 KSI	9 KSI	10 KSI	
60 KSI	#3	TOP	2'-4"	2'-1"	1'-10"	1'-8"	1'-7"	1'-6"	1'-5"	1'-4"	
		OTHER	1'-10"	1'-7"	1'-5"	1'-4"	1'-2"	1'-2"	1'-1"	1'-0"	
	#4	TOP	3'-2"	2'-9"	2'-5"	2'-3"	2'-1"	1'-11"	1'-10"	1'-9"	
		OTHER	2'-5"	2'-1"	1'-11"	1'-9"	1'-7"	1'-6"	1'-5"	1'-4"	
	#5	TOP	3'-11"	3'-5"	3'-0"	2'-9"	2'-7"	2'-5"	2'-3"	2'-2"	
		OTHER	3'-0"	2'-7"	2'-4"	2'-2"	2'-0"	1'-10"	1'-9"	1'-8"	
	#6	TOP	4'-8"	4'-1"	3'-8"	3'-4"	3'-1"	2'-11"	2'-9"	2'-7"	
		OTHER	3'-7"	3'-1"	2'-10"	2'-7"	2'-4"	2'-3"	2'-1"	2'-0"	
	#7	TOP	6'-9"	5'-11"	5'-3"	4'-10"	4'-6"	4'-2"	3'-11"	3'-9"	
		OTHER	5'-3"	4'-6"	4'-1"	3'-9"	3'-5"	3'-3"	3'-0"	2'-11"	
	#8	TOP	7'-9"	6'-9"	6'-0"	5'-6"	5'-1"	4'-9"	4'-6"	4'-3"	
OTHER		6'-0"	5'-2"	4'-8"	4'-3"	3'-11"	3'-8"	3'-6"	3'-3"		
#9	TOP	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	4'-10"		
	OTHER	6'-9"	5'-10"	5'-3"	4'-9"	4'-5"	4'-2"	3'-11"	3'-8"		
#10	TOP	9'-10"	8'-6"	7'-8"	7'-0"	6'-5"	6'-0"	5'-8"	5'-5"		
	OTHER	7'-7"	6'-7"	5'-11"	5'-4"	5'-0"	4'-8"	4'-5"	4'-2"		
#11	TOP	10'-11"	9'-6"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"	6'-0"		
	OTHER	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	5'-2"	4'-10"	4'-7"		

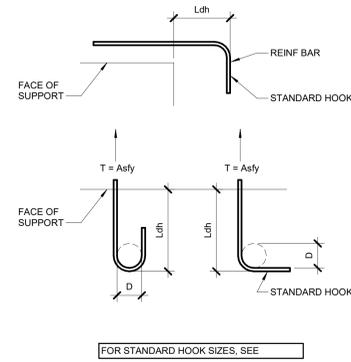
- NOTES:
- SPLICE LENGTHS SHOWN ARE APPLICABLE FOR SPLICES OCCURRING UNDER THE FOLLOWING CONDITIONS:
 - NORMAL-WEIGHT CONCRETE
 - MIN BAR SPACING REQUIREMENTS:
 - CLEAR SPACING BETWEEN BARS AT SPLICE LOCATION > BAR DIAMETER, CLEAR COVER TO BARS ≥ BAR DIAMETER, AND TIES OR STIRRUPS OCCUR PER CODE SPACING WITHIN LENGTH OF SPLICE OR
 - CLEAR SPACING BETWEEN BARS AT SPLICE ≥ 2 x BAR DIAMETER AND CLEAR COVER > BAR DIAMETER
 - INDICATED SPLICE LENGTHS SHALL BE INCREASED BY THE LISTED FACTORS WHERE THE FOLLOWING CONDITIONS EXIST:

CONDITION	SPLICE LENGTH MULTIPLIER*
A. BAR SPACING OR CLEAR COVER IS LESS THAN REQUIRED PER NOTE 1	1.5
B. LIGHTWEIGHT CONCRETE	1.3
C. EPOXY COATED REINF WITH COVER = 3 x BAR DIAMETER OR CLEAR SPACING < 6 x BAR DIAMETER	1.5
D. ALL OTHER EPOXY COATED BARS	1.2

*WHERE MULTIPLE CONDITIONS EXIST, APPLY EACH OF THE APPLICABLE FACTORS TO THE TABULATED TENSION LAP SPLICE LENGTH TO OBTAIN THE REQUIRED SPLICE LENGTH.
 - TOP BARS ARE HORIZ BARS LOCATED WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BARS
 - USE SMALLER BAR SIZE TO DETERMINE LENGTH WHERE SPLICING BARS OF DIFFERENT SIZES.

COLUMN VERTICAL SPLICE LENGTH											
REINF STEEL Fy	BAR SIZE	COMPRESSION LAP SPLICE LENGTH	CLASS B TENSION LAP SPLICE BASED ON CONCRETE STRENGTH, Fc								
			4 KSI	5 KSI	6 KSI	7 KSI	8 KSI	9 KSI	10 KSI		
60 KSI	#5	1'-7"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	
		1'-11"	1'-5"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"		
	#7	2'-3"	2'-6"	2'-2"	2'-0"	1'-11"	1'-9"	1'-8"	1'-7"		
		2'-8"	3'-2"	2'-10"	2'-8"	2'-5"	2'-4"	2'-1"	2'-0"		
	#9	2'-10"	4'-1"	3'-7"	3'-3"	3'-1"	2'-10"	2'-9"	2'-6"		
		3'-3"	5'-0"	4'-7"	4'-2"	3'-10"	3'-7"	3'-5"	3'-3"		
	#11	3'-7"	6'-3"	5'-7"	5'-2"	4'-8"	4'-6"	4'-2"	3'-11"		
		5'-8"	8'-3"	7'-5"	6'-9"	6'-4"	5'-11"	5'-7"	5'-3"		

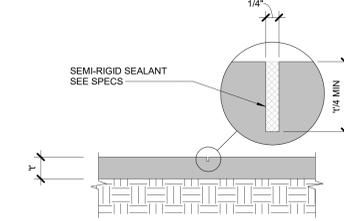
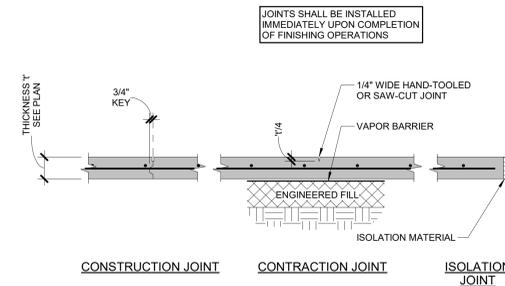
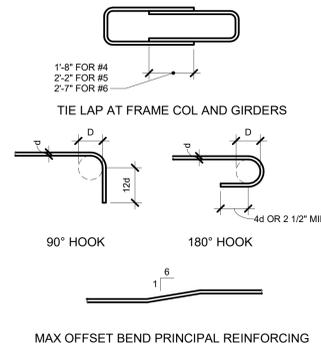
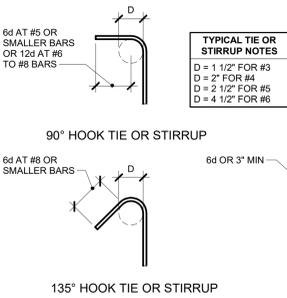
- NOTES:
- LAP SPLICES IN COLUMN VERTICAL REINFORCING STEEL SHALL BE THE LARGER OF VALUES SHOWN ABOVE PROVIDED THE CENTER-TO-CENTER SPACING OF ALL ADJACENT VERTICAL BARS WITHIN THE COLUMN LAP SPLICE LENGTH IS NO CLOSER THAN 5". OTHERWISE PROVIDE CLASS B LAP SPLICE LENGTH.
 - SEE GENERAL NOTES FOR ADDITIONAL INFORMATION REGARDING REINFORCING STEEL SPLICES.



MINIMUM TENSION EMBEDMENT LENGTHS, (Ldh), FOR STANDARD ACI END HOOKS FOR GRADE 60 BARS						
BAR SIZE	GENERAL USE (NON-SEISMIC)					
	3,000	4,000	5,000	7,000	8,000	
#3	6"	6"	6"	6"	6"	6"
#4	8"	7"	6"	6"	6"	6"
#5	10"	9"	8"	7"	7"	6"
#6	12"	10"	9"	8"	8"	7"
#7	14"	12"	11"	10"	9"	9"
#8	16"	14"	12"	11"	10"	10"
#9	18"	15"	14"	13"	12"	11"
#10	20"	17"	15"	14"	13"	12"
#11	22"	19"	17"	16"	14"	14"
#14	37"	32"	29"	27"	25"	23"
#18	50"	43"	39"	35"	33"	31"

- NOTES:
- SIDE COVER ≥ 2 1/2"
 - END COVER (90° ACI HOOKS) ≥ 2"
 - FOR SIDE COVER < 2 1/2" AND END COVER < 2", MULTIPLY THE TABULATED VALUES BY 1.43.
 - FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
 - FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.2.

MINIMUM TENSION EMBEDMENT LENGTHS, (Ldh), FOR STANDARD ACI END HOOKS FOR GRADE 80 BARS						
BAR SIZE	GENERAL USE (NON-SEISMIC)					
	3,000	4,000	5,000	6,000	7,000	8,000
#3	8"	8"	8"	8"	8"	8"
#4	11"	10"	8"	8"	8"	8"
#5	14"	12"	11"	10"	10"	8"
#6	16"	14"	12"	11"	11"	10"
#7	19"	16"	15"	14"	12"	12"
#8	22"	19"	18"	15"	14"	14"
#9	24"	20"	19"	18"	16"	15"
#10	27"	23"	20"	19"	18"	16"
#11	30"	26"	23"	22"	19"	19"



1 STANDARD HOOK AND TIE DIMENSIONS

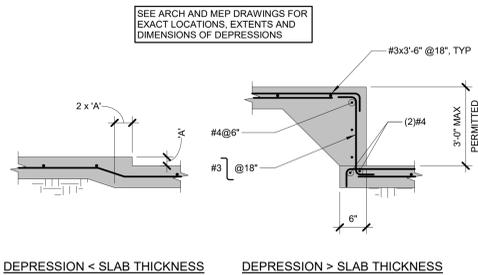
3/4" = 1'-0"
3015-01

2 SLAB ON GRADE CONSTRUCTION

3/4" = 1'-0"
2022-01

3 EXPOSED SLAB CONTROL JOINT WITH SEMI-RIGID SEALANT

3/4" = 1'-0"
2010-02

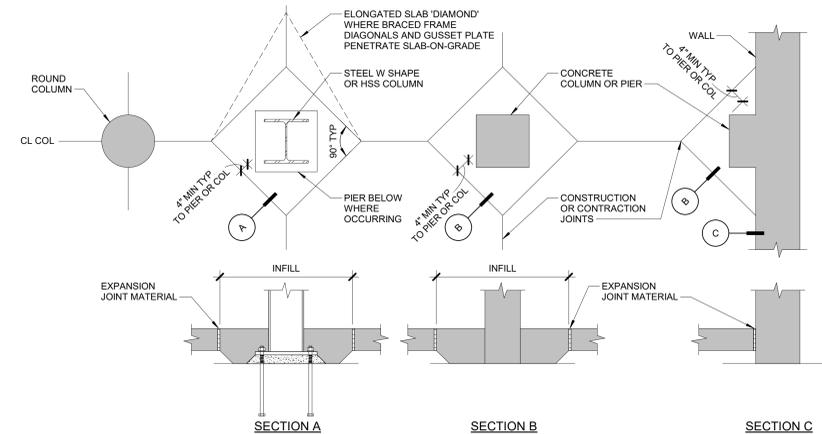


4 SLAB ON GRADE DEPRESSION AND STEP

3/4" = 1'-0"
2020-03

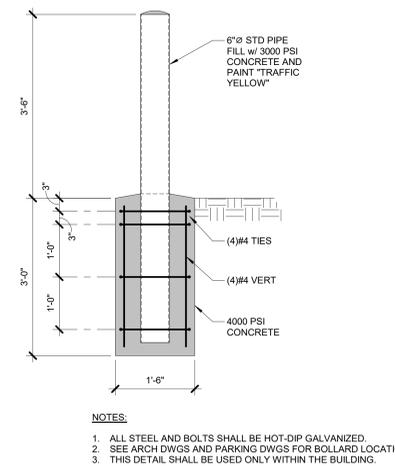
5 SLAB-ON-GRADE JOINTS AT COLUMNS / PIERS / WALLS

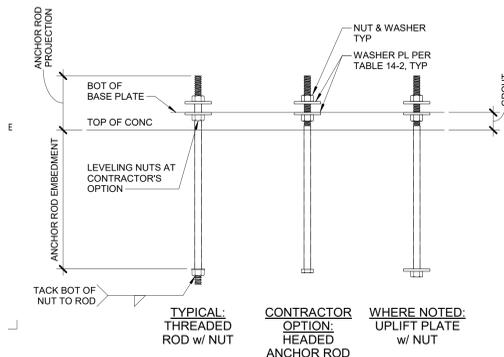
3/4" = 1'-0"
2010-03



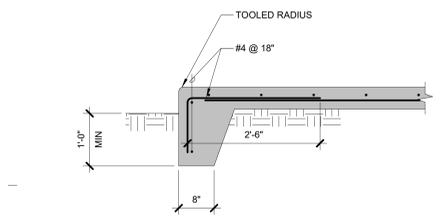
6 STANDARD IN-GROUND BOLLARD

3/4" = 1'-0"
2960-05





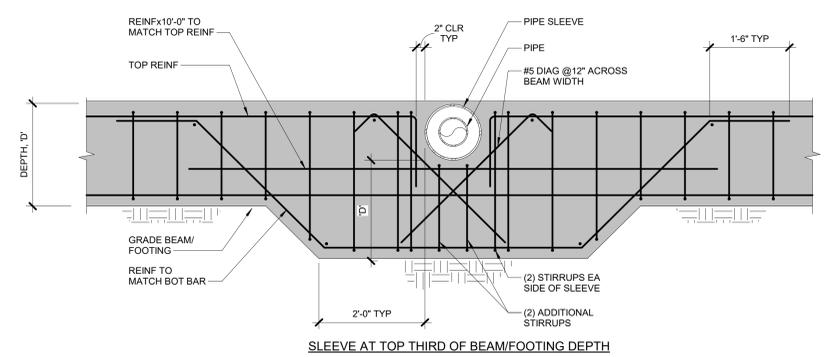
1 CAST-IN ANCHOR RODS
3/4" = 1'-0"
5100-01



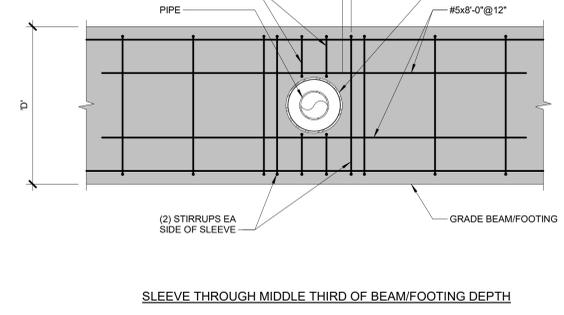
2 EDGE OF SLAB DETAIL
3/4" = 1'-0"
2020-06

- NOTES:**
1. D = OUTSIDE DIAMETER OF CONDUIT.
 2. T = CONCRETE SLAB/WALL THICKNESS.
 3. CONDUITS SHALL BE CHAINED TO MID-DEPTH OF SLAB/WALL AS MUCH AS POSSIBLE.
 4. CONDUITS MAY NOT BE PLACED OVER TOP OF OR WITHIN A CONCRETE COLUMN OR WALL.
 5. CONDUITS MAY NOT BE LOCATED UNDER/BEHIND STEEL PLATE EMBEDS.
 6. CONDUITS MAY NOT BE TIED TO POST-TENSIONING TENDONS OR SHEAR RAIL REINFORCING.
 7. CONDUITS MAY NOT BE PLACED WITHIN OR PENETRATE (VERTICALLY OR HORIZONTALLY), A CONCRETE BEAM WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD.
 8. NO MORE THAN TWO CONDUITS MAY OVERLAP/CROSS EACH OTHER WITHIN A 2'-0" DISTANCE.
 9. WHERE CLEAR DISTANCE BETWEEN SLEEVES IS IMPOSSIBLE, THAT AREA SHALL BE TREATED AS A SLAB OR WALL OPENING AND REINFORCED PER TYPICAL DETAILS. CRITICAL AREAS AND AREAS OF LARGE CONDUIT CONGESTION SHALL REQUIRED APPROVAL OF THE ENGINEER OF RECORD.

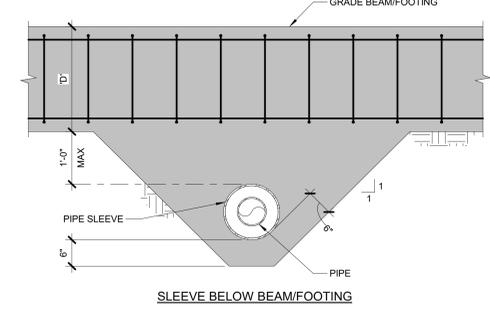
4 PIPING THRU SLAB WITH NOTES
3/4" = 1'-0"



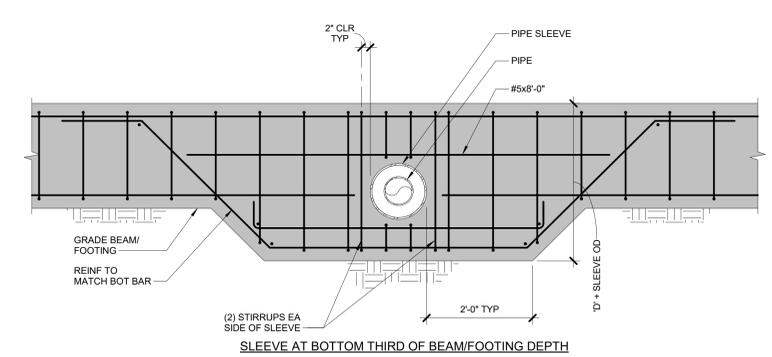
3 PIPES THROUGH GRADE BEAM / FOOTING
3/4" = 1'-0"
2360-02



5 REINFORCING AT STEP IN TOP OF WALL
3/4" = 1'-0"

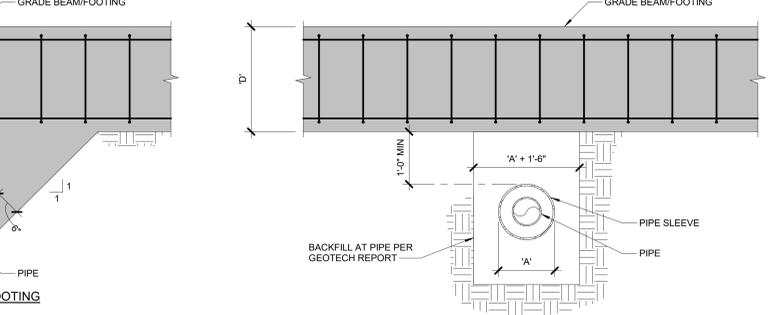


6 SLAB POUR-OVER AT THRESHOLD WITH EXTERIOR SLAB BEARING
3/4" = 1'-0"

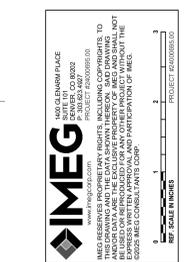


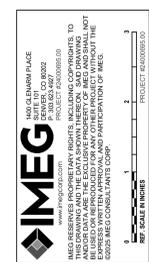
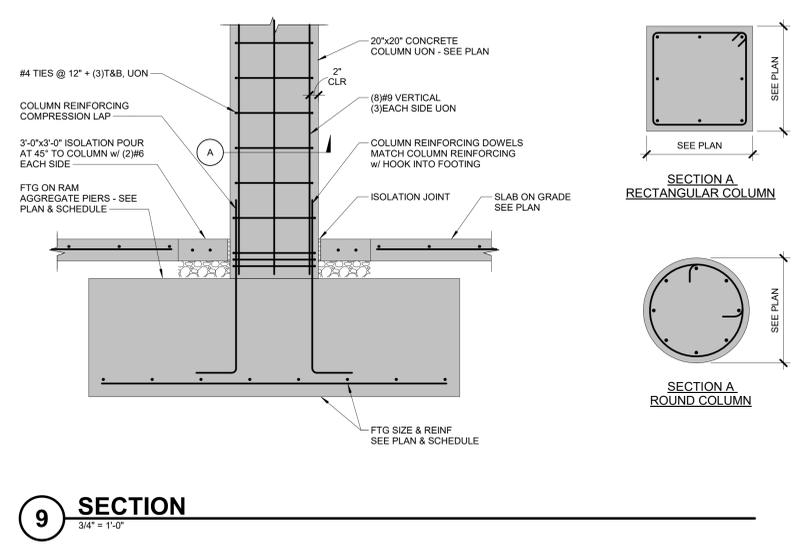
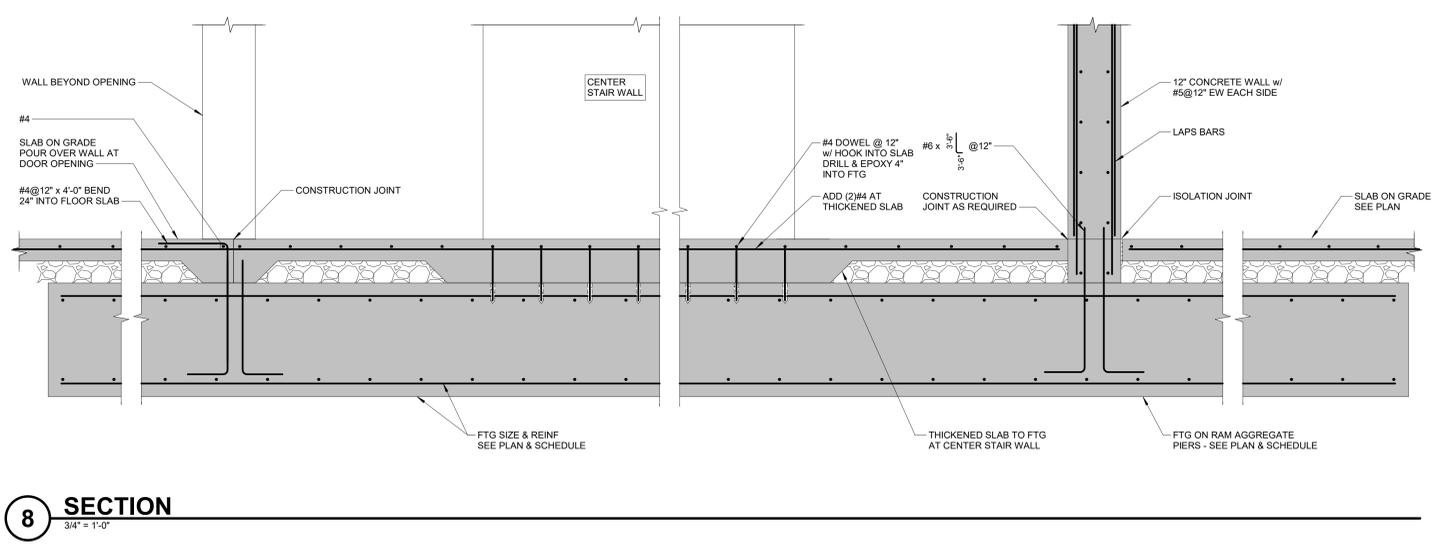
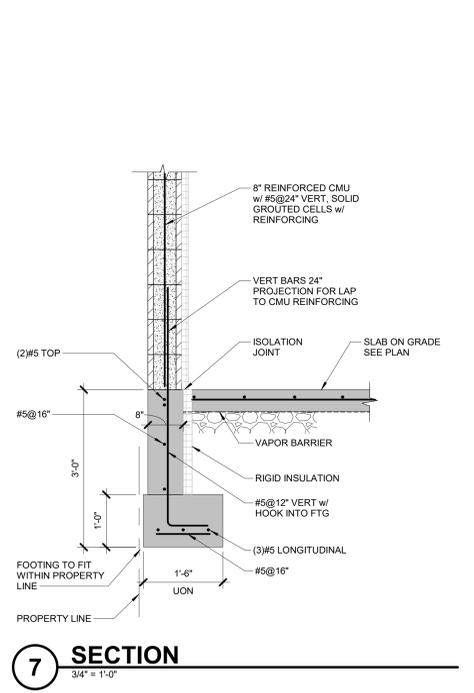
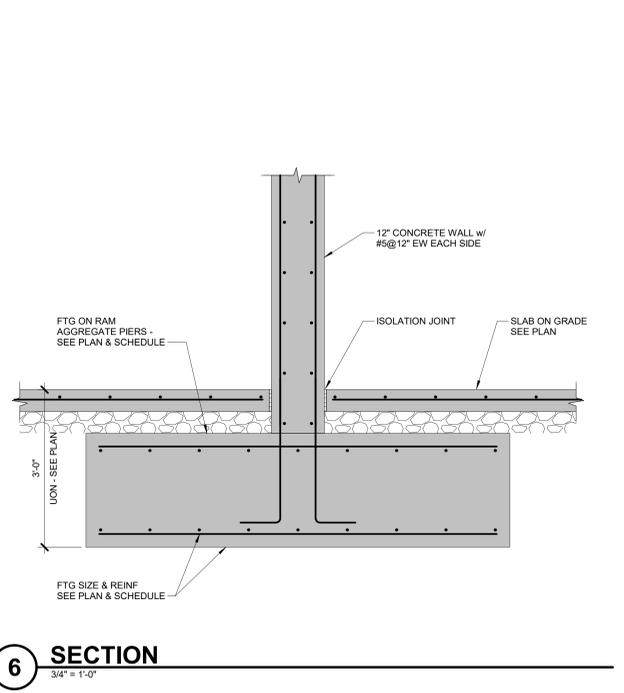
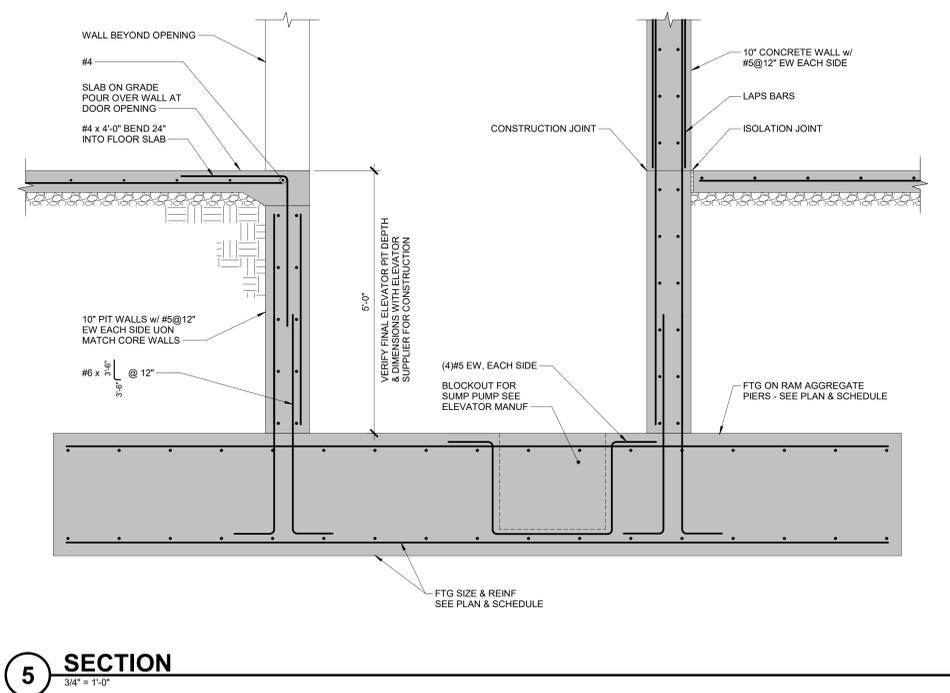
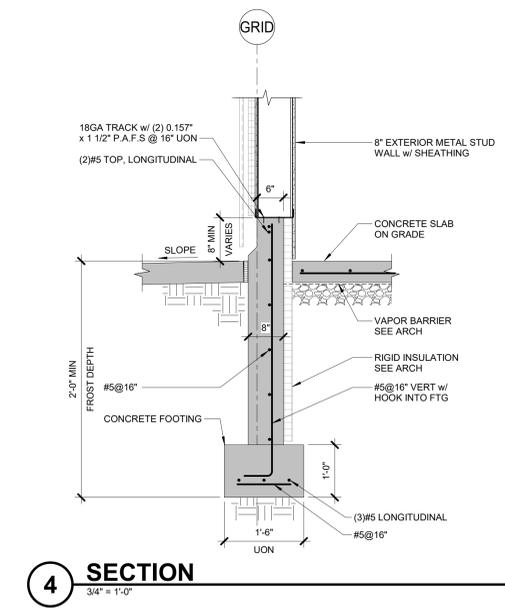
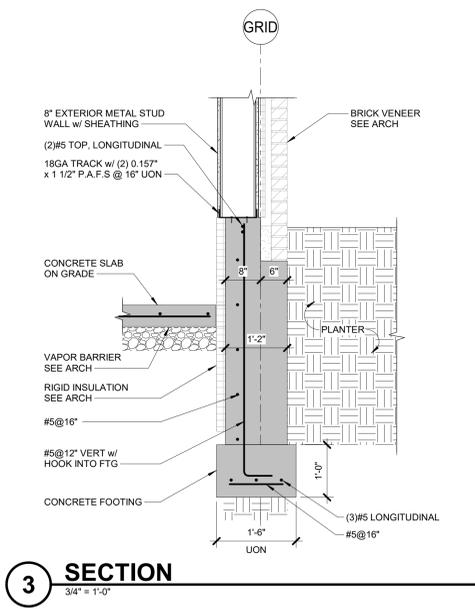
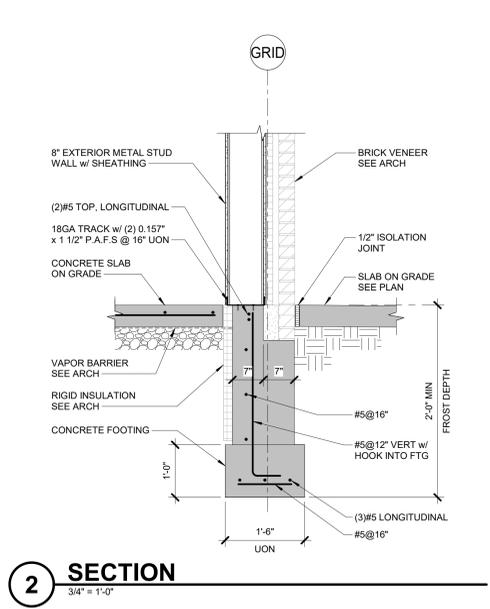
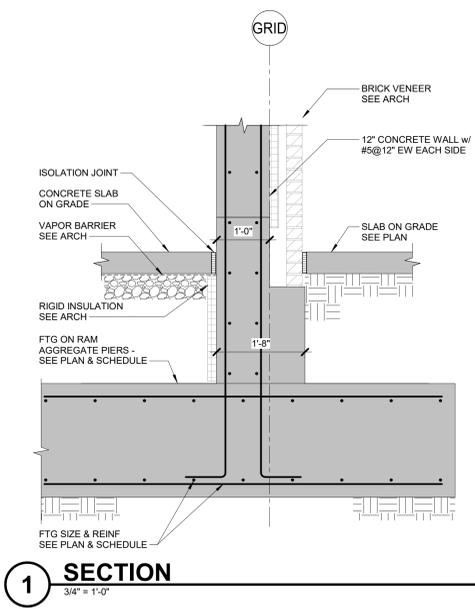
7 STAIR STRINGER AT SOG
3/4" = 1'-0"

- NOTES:**
1. SLEEVE DIA TO BE 6" LARGER THAN PIPE DIA. CENTER PIPE IN SLEEVE.
 2. SEAL VOID BETWEEN PIPE AND SLEEVE W/ ELASTIC WATERPROOF MATERIAL, TYP.
 3. MAX PERMITTED SLEEVE DIA = D/2.



8 SLEEVE BELOW BEAM/FOOTING
3/4" = 1'-0"





FEEDER SCHEDULE ALUMINUM	
4000W	1[W-700kcmil, 750kcmilG, 4°C]
3000W	8[W-700kcmil, 600kcmilG, 4°C]
2500W	7[W-700kcmil, 600kcmilG, 4°C]
2000W	5[W-600kcmil, 400kcmilG, 4°C]
1500W	5[W-600kcmil, 350kcmilG, 4°C]
1200W	4[W-500kcmil, 250kcmilG, 3-1/2°C]
1000W	4[W-500kcmil, 40G, 3°C]
800W	3[W-400kcmil, 30G, 3°C]
750W	3[W-350kcmil, 30G, 3°C]
600W	2[W-500kcmil, 20G, 3-1/2°C]
500W	2[W-500kcmil, 10G, 3°C]
400W	2[W-250kcmil, #1G, 3°C]
350W	2[W-4/0, #1G, 2-1/2°C]
300W	W-500kcmil, #2G, 3-1/2°C
250W	W-350kcmil, #2G, 3°C
225W	W-300kcmil, #2G, 3°C
200W	W-250kcmil, #4G, 3°C
175W	W-4/0, #4G, 2-1/2°C
150W	W-3/0, #4G, 2°C
125W	W-2/0, #4G, 2°C
100W	W-1/0, #6G, 2°C
90W	W-1/0, #6G, 2°C
80W	WR1, #6G, 1-1/2°C
70W	WR2, #6G, 1-1/4°C
60W	WR2, #6G, 1-1/4°C
50W	WR4, #6G, 1-1/4°C
40W	WR6, #6G, 1°C

LOAD CENTER FEEDERS - ALUMINUM					
All conductors are based upon NEC Table 310.16.					
VDC - Stands for Voltage Drop Compensated					
DISTANCE	FEEDER	AL	MC	VDC	
0 - 85 FT	3#2/0, #4G	AL	MC		
85 - 100 FT	3#3/0, #2G	AL	MC	VDC	
100 - 120 FT	3#4/0, #2G	AL	MC	VDC	
120 - 135 FT	3#250kcmil, #11G	AL	MC	VDC	
135 - 155 FT	3#300kcmil, #1110G	AL	2 1/2"	VDC	
0 - 85 FT	3#2/0, #4G	AL	MC		
85 - 105 FT	3#4/0, #2G	AL	MC	VDC	
105 - 115 FT	3#250kcmil, #10G	AL	MC	VDC	
115 - 130 FT	3#300kcmil, #11G	AL	MC	VDC	
130 - 155 FT	3#400kcmil, #1110G	AL	2 1/2"	VDC	

THIS TABLE INDICATES MINIMUM CONDUCTOR SIZE FOR FEEDERS OF THE AMPACITY INDICATED WHERE #W INDICATES THE # AMPACITY AND W-NUMBERS OF WIRE, #SW INDICATES NO GROUND, ALL CONDUCTORS SHALL BE ALUMINUM UNLESS NOTED OTHERWISE.

*CONDUCTOR AMPACITIES SHALL BE BASED ON TABLE 310.15(B)(16) 60 DEGREE COLUMN UP TO 100 AMPS AND 75 DEGREE COLUMN ABOVE 100 AMPS UNLESS OTHERWISE PERMITTED BY NEC. AMPACITY RATING SHALL BE SELECTED IN ACCORDANCE WITH NEC 110.14 (C).

THE MASTER ELECTRICIAN SHALL BE RESPONSIBLE FOR ENSURING THAT NO FEEDERS OR BRANCH CIRCUITS ARE INSTALLED IN A MANNER OR SIZED IN SUCH A WAY AS TO VIOLATE NEC.

SERVICE GROUND TABLE	EQUIPMENT GROUND TABLE
150G/CU #6	20EG #10
200G/CU #4	60EG #8
300G/CU 2	100EG #6
500G/CU 1/0	200-1200A PER ABOVE
1000G/CU 2/0	1600EG 350KCMIL
>1000G/CU 3/0	2000EG 400KCMIL

SERVICE GROUND CONDUCTORS SIZED PER NEC TABLE 250.66 EQUIPMENT GROUND CONDUCTORS SIZED PER NEC TABLE 250.122 ALL CONDUCTORS SHALL BE ALUMINUM UNLESS NOTED OTHERWISE.

THE SERVICE GROUND CHART INDICATES THE MINIMUM SERVICE GROUND CONDUCTOR BASED ON #G WHERE # IS THE AMPACITY FROM THE CHART ABOVE, AND THE EQUIPMENT GROUND CHART INDICATES THE MINIMUM EQUIPMENT GROUNDING CONDUCTOR SIZE #EG WHERE # IS THE RATING/SETTING OF THE OVERCURRENT DEVICE PROTECTING THE CONDUCTORS AND EQUIPMENT.

WHERE DISCREPANCIES OCCUR BETWEEN THE FEEDER SCHEDULE SCHEDULE AND THE GROUNDING TABLES, THE LARGER CONDUCTOR SHALL BE USED UNLESS OTHERWISE PERMITTED BY THE NEC.

THE INSTALLATION SHALL MEET ALL NEC 250 GROUNDING AND BONDING REQUIREMENTS INCLUDING 250.4 PATH FOR FAULT CURRENT. PROVIDE COMPLETE RACEWAY SYSTEMS METALLICALLY JOINED, CONNECTED, AND FITTINGS AS REQUIRED FOR ELECTRICAL CONTINUITY PER NEC 300.10

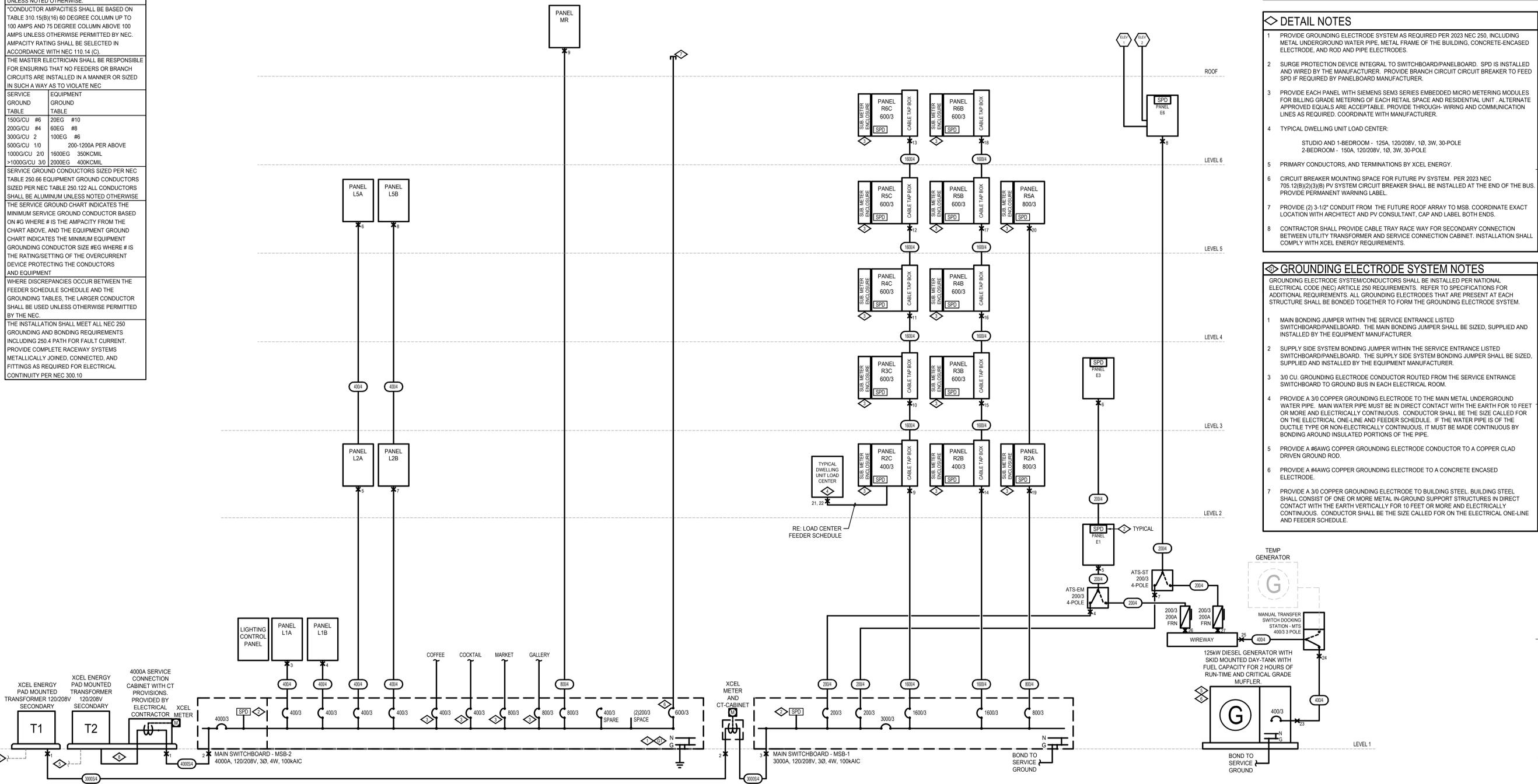
LOAD SUMMARY - SWITCHBOARD MSB-1		
3000A, 120/208V, 3Ø, 4W		
LOAD IDENTIFICATION	CONNECTED LOAD (VA)	CONNECTED LOAD (A)
TOTAL RESIDENTIAL LOAD	889,728	2,469.6
PANEL E1	11,728	32.5
PANEL E6	44,406	123.3
TOTAL LOAD ON 3000A SERVICE	945,860	2,625

LOAD SUMMARY - SWITCHBOARD MSB-2		
4000A, 120/208V, 3Ø, 4W		
LOAD IDENTIFICATION	CONNECTED LOAD (VA)	CONNECTED LOAD (A)
PANEL L1A	99,588	276.4
PANEL L1B	75,186	208.7
PANEL L2A	47,763	132.6
PANEL L2B	66,546	185.0
PANEL MR	153,963	427.3
RETAIL - COFFEE	144,106	400.0
RETAIL - COCKTAIL	144,106	400.0
RETAIL - MARKET	288,213	800.0
RETAIL - GALLERY	288,213	800.0
TOTAL LOAD ON 4000A SERVICE	1,307,772	3,630

- ### GENERAL NOTES
- CONTRACTOR SHALL MAINTAIN THE FIRE RATING AND UL LISTING OF ALL FIRE RATED WALLS AND FLOOR/CEILING ASSEMBLIES. THIS INCLUDES ANY AND ALL PENETRATIONS.
 - PROVIDE FIRE RATED BARRIER AT LIGHT FIXTURE PENETRATIONS OF THE RATED FLOOR/CEILING ASSEMBLY.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE WALL OPENING PROTECTIVE MATERIALS (PUTTY PADS) FOR ELECTRIC BOXES AS REQUIRED IN DEMISING WALLS AND FIRE RATED WALLS. NO TWO OUTLETS CAN BE INSTALLED IN SAME STUD CAVITY. IN PARTICULAR IN DEMISING UNIT WALLS. PUTTY PADS SHALL BE UL LISTED FOR USE WITH THE PARTICULAR OUTLET BOX TO ALLOW FOR A SPACING OF LESS THAN 24" BETWEEN OUTLETS IN DEMISING WALLS.
 - PROVIDE SLEEVES AS REQUIRED FOR VERTICAL ROUTING OF FEEDERS. RACEWAYS SHALL BE CONCEALED WHEREVER POSSIBLE. ROUTE THROUGH WALLS AS REQUIRED. COORDINATE SLEEVE LOCATIONS AND RACEWAY ROUTING WITH STRUCTURAL ENGINEER AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
 - ELECTRICAL EQUIPMENT MUST FIT IN THE SPACE PROVIDED WHILE MAINTAINING ALL CLEARANCE AND WORKING SPACE REQUIREMENTS.
 - EMERGENCY LIGHTING AND EXIT SIGN LOCATION PER IBC 2018 AND SUBJECT TO APPROVAL BY AUTHORITY HAVING JURISDICTION.
 - WHERE EVER POSSIBLE, CONDUIT SHALL BE ROUTED UNEXPOSED. EXPOSED CONDUIT MUST BE ROUTED PARALLEL OR PERPENDICULAR TO BUILDING LINES. COORDINATE EXPOSED CONDUIT ROUTING WITH ARCHITECT PRIOR TO ROUGH-IN.
 - MAINTAIN FIRE RATING OF ALL PENETRATIONS.
 - ALUMINUM ALLOY CONDUCTORS SHALL BE PERMITTED WHERE ALLOWED BY THE NEC EXCEPT TO ROTATING EQUIPMENT INCLUDING MECHANICAL EQUIPMENT AND ELEVATORS.
 - ALUMINUM BUSSING IS PERMITTED IN ALL ELECTRICAL EQUIPMENT.
 - APPLICABLE OVERCURRENT PROTECTION DEVICES SHALL COMPLY WITH ARC ENERGY REDUCTION REQUIREMENTS OF NEC 240.87.

- ### DETAIL NOTES
- PROVIDE GROUNDING ELECTRODE SYSTEM AS REQUIRED PER 2023 NEC 250, INCLUDING METAL UNDERGROUND WATER PIPE, METAL FRAME OF THE BUILDING, CONCRETE-ENCASED ELECTRODE, AND ROD AND PIPE ELECTRODES.
 - SURGE PROTECTION DEVICE INTEGRAL TO SWITCHBOARD/PANELBOARD. SPD IS INSTALLED AND WIRED BY THE MANUFACTURER. PROVIDE BRANCH CIRCUIT CIRCUIT BREAKER TO FEED SPD IF REQUIRED BY PANELBOARD MANUFACTURER.
 - PROVIDE EACH PANEL WITH SIEMENS SEM3 SERIES EMBEDDED MICRO METERING MODULES FOR BILLING GRADE METERING OF EACH RETAIL SPACE AND RESIDENTIAL UNIT. ALTERNATE APPROVED EQUALS ARE ACCEPTABLE. PROVIDE THROUGH-WIRING AND COMMUNICATION LINES AS REQUIRED. COORDINATE WITH MANUFACTURER.
 - TYPICAL DWELLING UNIT LOAD CENTER:
 - STUDIO AND 1-BEDROOM - 125A, 120/208V, 1Ø, 3W, 3Ø-POLE
 - 2-BEDROOM - 150A, 120/208V, 1Ø, 3W, 3Ø-POLE
 - PRIMARY CONDUCTORS, AND TERMINATIONS BY XCEL ENERGY.
 - CIRCUIT BREAKER MOUNTING SPACE FOR FUTURE PV SYSTEM. PER 2023 NEC 705.12(B)(2)(3)(B) PV SYSTEM CIRCUIT BREAKER SHALL BE INSTALLED AT THE END OF THE BUS. PROVIDE PERMANENT WARNING LABEL.
 - PROVIDE (2) 3-1/2" CONDUIT FROM THE FUTURE ROOF ARRAY TO MSB. COORDINATE EXACT LOCATION WITH ARCHITECT AND PV CONSULTANT, CAP AND LABEL BOTH ENDS.
 - CONTRACTOR SHALL PROVIDE CABLE TRAY RACE WAY FOR SECONDARY CONNECTION BETWEEN UTILITY TRANSFORMER AND SERVICE CONNECTION CABINET. INSTALLATION SHALL COMPLY WITH XCEL ENERGY REQUIREMENTS.

- ### GROUNDING ELECTRODE SYSTEM NOTES
- MAIN BONDING JUMPER WITHIN THE SERVICE ENTRANCE LISTED SWITCHBOARD/PANELBOARD. THE MAIN BONDING JUMPER SHALL BE SIZED, SUPPLIED AND INSTALLED BY THE EQUIPMENT MANUFACTURER.
 - SUPPLY SIDE SYSTEM BONDING JUMPER WITHIN THE SERVICE ENTRANCE LISTED SWITCHBOARD/PANELBOARD. THE SUPPLY SIDE SYSTEM BONDING JUMPER SHALL BE SIZED, SUPPLIED AND INSTALLED BY THE EQUIPMENT MANUFACTURER.
 - 3/0 CU GROUNDING ELECTRODE CONDUCTOR ROUTED FROM THE SERVICE ENTRANCE SWITCHBOARD TO GROUND BUS IN EACH ELECTRICAL ROOM.
 - PROVIDE A 3Ø COPPER GROUNDING ELECTRODE TO THE MAIN METAL UNDERGROUND WATER PIPE. MAIN WATER PIPE MUST BE IN DIRECT CONTACT WITH THE EARTH FOR 10 FEET OR MORE AND ELECTRICALLY CONTINUOUS. CONDUCTOR SHALL BE THE SIZE CALLED FOR ON THE ELECTRICAL ONE-LINE AND FEEDER SCHEDULE. IF THE WATER PIPE IS OF THE DUCTILE TYPE OR NON-ELECTRICALLY CONTINUOUS, IT MUST BE MADE CONTINUOUS BY BONDING AROUND INSULATED PORTIONS OF THE PIPE.
 - PROVIDE A #6AWG COPPER GROUNDING ELECTRODE CONDUCTOR TO A COPPER CLAD DRIVEN GROUND ROD.
 - PROVIDE A #4AWG COPPER GROUNDING ELECTRODE TO A CONCRETE ENCASED ELECTRODE.
 - PROVIDE A 3Ø COPPER GROUNDING ELECTRODE TO BUILDING STEEL. BUILDING STEEL SHALL CONSIST OF ONE OR MORE METAL IN-GROUND SUPPORT STRUCTURES IN DIRECT CONTACT WITH THE EARTH VERTICALLY FOR 10 FEET OR MORE AND ELECTRICALLY CONTINUOUS. CONDUCTOR SHALL BE THE SIZE CALLED FOR ON THE ELECTRICAL ONE-LINE AND FEEDER SCHEDULE.

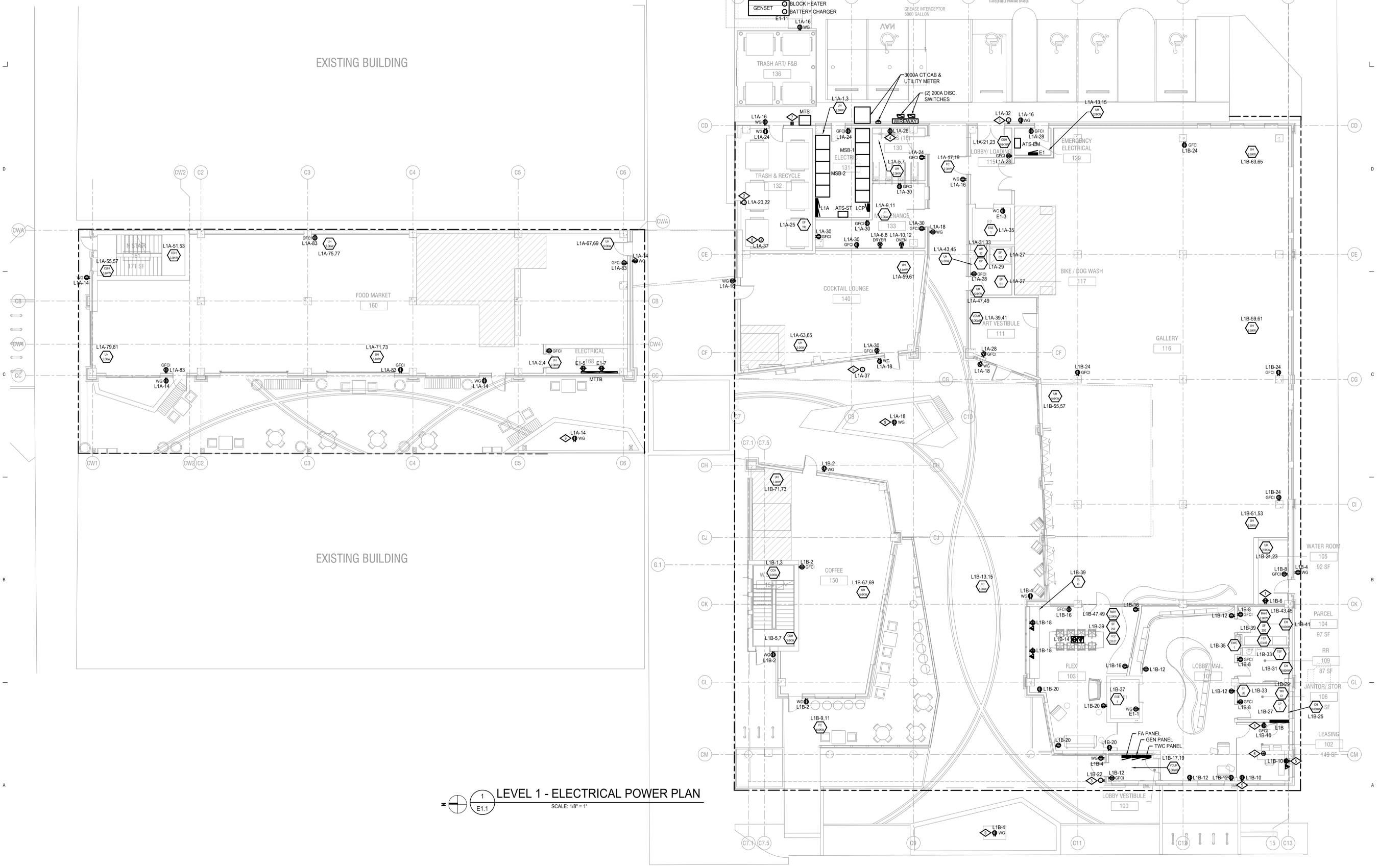


1 ELECTRICAL ONE-LINE DIAGRAM
E0.01 NO SCALE

- ◇ DETAIL NOTES**
1. PROVIDE DEDICATED 20A RECEPTACLE FOR IRRIGATION CONTROLLER. VERIFY CONNECTION REQUIREMENTS WITH EQUIPMENT SUPPLIER. COORDINATE FINAL MOUNTING LOCATION WITH ARCHITECT.
 2. PROVIDE 20A 208V/1Ø ELECTRICAL CONNECTION FOR OVERHEAD DOOR. VERIFY FINAL CONNECTION REQUIREMENTS AND CONTROLS RACEWAYS WITH EQUIPMENT SUPPLIER. COORDINATE FINAL MOUNTING LOCATION WITH ARCHITECT.
 3. PROVIDE 120V ELECTRICAL CONNECTION FOR TELEPHONE ENTRY SYSTEM. COORDINATE FINAL MOUNTING LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO SHEET E0.03 FOR ADDITIONAL INFORMATION.
 4. PROVIDE DEDICATED 20A ELECTRICAL CONNECTION FOR PLUGGIO INTEGRATED OUTLET, OR APPROVED EQUAL, WHICH IS TO BE UTILIZED FOR E-BIKE CHARGING.

- ◇ DETAIL NOTES**
5. PROVIDE HALF-SWITCHED RECEPTACLES FOR OFFICE SPACES. SWITCHED PORTION OF RECEPTACLES SHALL BE CONTROLLED VIA LOCAL OCCUPANCY SENSORS IN ACCORDANCE WITH 2024 IECC SECTION C405.12.1. REFER TO MANUFACTURER FOR DEVICE LAYOUTS AND COVERAGE AREA.
 6. PROVIDE OCCUPANCY SENSORS AS SHOWN ON PLAN. INTENDED TO SERVE SPLIT-WIRED RECEPTACLES FOR COMPLIANCE OF 2024 IECC C405.12. REFER TO ADJACENT PLUG-LOAD CONTROLLER NOTES ON THIS SHEET.
 7. PROVIDE ELECTRICAL CONNECTION FOR GENERATOR EMERGENCY POWER OFF (EPO) SWITCH.
 8. PROVIDE 120V ELECTRICAL CONNECTION FOR PLUMBING HEAT TRACE. REFER TO PLUMBING DESIGN DOCUMENTS FOR ADDITIONAL INFORMATION.
 9. REFER TO DETAIL 1 ON SHEET E0.0 FOR ADDITIONAL MOUNTING INFORMATION.

- PLUG LOAD CONTROL NOTES**
1. SWITCHED RECEPTACLES SHALL BE WIRED THRU PLUG LOAD CONTROLLER. ON/OFF CONTROL BASED ON OCCUPANCY. PURSUANT TO 2024 IECC C405.12. TOP-OUTLET IS SWITCHED, BOTTOM OUTLET IS UNSWITCHED.
 2. OCCUPANCY CONTROLS SHALL TURN OFF DESIGNATED RECEPTACLES WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE ROOM OR SPACE.
 3. VERIFY SWITCHED RECEPTACLES ARE PERMANENTLY MARKED IN ACCORDANCE TO C405.12.1(3)



LEVEL 1 - ELECTRICAL POWER PLAN
SCALE: 1/8" = 1'-0"

