<u>GENERAL:</u>

- 1. IN MOST CASES THE CRITERIA FOR THE STRUCTURE IS ESTABLISHED ON THE DRAWINGS, AND IN THE SPECIFICATIONS. WHERE IT IS NOT, THESE NOTES SHALL GOVERN.
- 2. DURING CONSTRUCTION, TEMPORARY BRACING AND/OR SHORING SHALL BE DESIGNED AND PROVIDED WHEREVER NECESSARY BY THE CONTRACTOR TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING CONSTRUCTION EQUIPMENT AND THE OPERATION OF SAME. SUCH BRACING AND/OR SHORING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY.
- 3. ALL CONSTRUCTION AND FABRICATION SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS:
 - A. 2018 IBC INTERNATIONAL BUILDING CODE B. AISC 360-10 - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
 - C. AWS D1.1-2010 STRUCTURAL WELDING CODE
- D. ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS 4. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF:
 - A. OSHA OCCUPATIONAL SAFETY HEALTH ACT. B. MSHA - MINING SAFETY AND HEALTH ADMINISTRATION

5. DESIGN CRITERIA: (PER IBC 2018/ASCE7-16)

C. ALL APPLICABLE AMERICAN SAFETY STANDARDS

Α.	WIND LOAD~EXPOSURE "C"	106	MP
В.	GROUND SNOW LOAD	20	PS
C.	ROOF LIVE LOAD	12	PS

MAPPED SPECTRAL ACCELERATION DESIGN SPECTRAL ACCELERATION

D. SEISMIC DESIGN DATA

 $S_{DS} = 0.381g, S_{D1} = 0.158g$ IMPORTANCE FACTOR OCCUPANCY CATEGORY BUILDING SEISMIC DESIGN CATEGORY

SITE CLASS

40 KIPS

20 KIPS

ORDINARY STEEL MOMENT FRAMES EQUIVALENT LATERAL FORCE METHOD

D (ASSUMED)

 $S_S = 0.440g, S_1 = 0.158g$

BASIC STRUCTURAL SYSTEM TYPE RESPONSE MODIFICATION FACTOR ANALYSIS PROCEDURE

DESIGN LOADS (PROVIDED BY CARUSO TURLEY, INC)						
VERTICAL LOADS HORIZONTAL LOADS					AL LOADS	
AD LOAD	ROOF LIVE	SNOW LOAD	WIND LO	DAD	WIND	SEISMIC
AD LOAD	LOAD		DOWNWORD	UPLIFT	LOAD	LOAD
40 KIPS	45 KIPS	75 KIPS	55 KIPS	62 KIPS	6.5 KIPS	4.0 KIPS
20 KIPS	22.5 KIPS	37.5 KIPS	27.5 KIPS	31 KIPS	3.25 KIPS	2.0 KIPS

13.5 KIPS | 13.9 KIPS |

10 KIPS | 11.25 KIPS | 18.75 KIPS | 13.75 KIPS | 15.5 KIPS | 1.63 KIPS | 1.0 KIPS

10.8 KIPS

5.4 KIPS 6.5 KIPS (TYPE 9) 1. WIND AND SEISMIC LOADS ARE ULTIMATE LOADS

2. HORZONTIAL LOADS CAN ACT IN ANY DIRECTION

- 6. DO NOT SCALE DRAWINGS. WORK TO DIMENSIONS ONLY.
- 7. WHEN CONFLICTS OCCUR BETWEEN DIMENSIONS, TYPICAL DETAILS, GENERAL NOTES, SPECIFICATIONS, AND THE ENGINEERING DRAWINGS, THE CONTRACTOR SHALL MAKE NOTE OF SUCH CONFLICTS AND NOTIFY THE ENGINEER OF THESI CONFLICTS IMMEDIATELY.
- 8. SHOP DRAWINGS SHALL BE FURNISHED TO SATISFY THE ENGINEERS DUTY OF CARE.

SUBSTITUTIONS:

LOCATION

TYP INTERIOR COLUMN

(TYPES 2B, 4, AND 7) TYP EXTERIOR COLUMN

(TYPES 1B, 2, 3, 3B AND 8) TYP CORNER COLUMN

> (TYPES 1 AND 6) W30 GIRDER

(CONNECTION TYPE) | DEAD LOAD |

- 1. WHERE ALTERNATE TYPES OF MATERIAL OR METHODS OF CONSTRUCTION ARE PROPOSED, THEY MUST BE LISTED BY NAME AND MANUFACTURER AND SUBMITTED WITH SPECIFICATIONS FOR ENGINEER'S REVIEW OR APPROVAL.
- 2. MEMBERS OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED, SUBJECT TO APPROVAL. CHANGES IN SIZE OR DIMENSIONS OF OPENINGS, BEAM CUTS, OR SLEEVES ARE SUBJECT TO APPROVAL.

EXISTING CONSTRUCTION:

- 1. PROTECT EXISTING STRUCTURE DURING CONSTRUCTION.
- 2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL MAKE NOTE OF ALL UTILITIES (VISIBLE AND/OR INDICATED ON DRAWINGS) THAT MAY BECOME INVOLVED DURING THE CONSTRUCTION. ALL EXISTING UTILITY LINES, WATER LINES, SEWERS, ETC., ARE TO BE FULLY SUPPORTED AND PROTECTED DURING CONSTRUCTION.
- 3. WHEN WORKING WITHIN OR ADJACENT TO EXISTING STRUCTURES, ALL DIMENSIONS, GRADES AND OBSTRUCTIONS ARE TO BE OBSERVED AND VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF FABRICATION, CONSTRUCTION, AND EQUIPMENT INSTALLATION.
- 4. DESIGN DRAWINGS ARE BASED ON EXISTING DOCUMENTATION, ASSUMING THAT THE EXISTING CONSTRUCTION IS UNMODIFIED AND WELL MAINTAINED.
- 5. CONTRACTOR SHALL REVIEW ANY CLEANING, PAINTING, AND REPAIR OF EXISTING CONSTRUCTION WITH THE OWNER PRIOR TO COMMENCEMENT OF SUCH REPAIRS.
- 6. DIMENSIONS FOR EXISTING FACILITIES MAY BE BASED ON FIELD MEASUREMENTS AND/OR EXISTING DESIGN DRAWINGS. ALL EXISTING FACILITY DIMENSIONS ARE SUBJECT TO NORMAL CONSTRUCTION AND MEASUREMENT TOLERANCES. NORMAL CONSTRUCTION TOLERANCES FOR CONCRETE SHALL BE PER ACI 117. NORMAL CONSTRUCTION TOLERANCES FOR STRUCTURAL STEEL SHALL BE PER "THE AISC CODE OF STANDARD PRACTICE" FRAME TOLERANCES.

SHORING & BRACING:

1. SHORING AND BRACING SHOULD BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING THE CURRENT OSHA/MSHA EXCAVATION AND TRENCH SAFETY STANDARDS.

PAINT:

1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH OWNER REQUIREMENTS.

DAY AND NIGHT SOLAR

ST. LOUIS, MO BJC CAMPUS PARKING SOLAR PROJECT 4456 DUNCAN AVENUE BASE CONNECTIONS

DRAWING INDEX				
DRAWING NO.	DESCRIPTION	RELEASE DATE		
1628-C-001	COVER SHEET - GENERAL NOTES & DRAWING INDEX (THIS DRAWING)			
1628-S-001	BASE CONNECTION TYPE 1			
1628-S-002	BASE CONNECTION TYPES 2 & 2B			
1628-S-003	BASE CONNECTION TYPE 3 & 3B			
1628-S-004	BASE CONNECTION TYPE 4			
1628-S-005	BASE CONNECTION TYPES 5 & 6			
1628-S-006	BASE CONNECTION TYPE 7			
1628-S-007	BASE CONNECTION TYPES 8 & 9			

STRUCTURAL STEEL:

- 1. ALL STRUCTURAL STEEL WIDE FLANGE & STANDARD BEAM SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992 GR 50 UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL ANGLES, CHANNELS, BINS, CHUTES, AND DUCTWORK SHALL BE ASTM A36; Fy=36 ksi. STRUCTURAL TUBE SHALL BE ASTM A500 GRADE B UNLESS NOTED. ALL STRUCTURAL PIPE SHALL BE ASTM A500 OR ASTM A53 TYPE E OR S GRADE B, Fy = 35 ksi.
- 2. THREADED RODS SHALL CONFORM TO ASTM F-593 GRADE 316 STAINLESS STEEL AND NUTS/WASHERS CONFORMING TO ASTM F-594 GRADE 316 STAINLESS STEEL (U.N.O.).
- 3. WHERE POSITION OF MEMBERS PROHIBITS THE USE OF A STANDARD CONNECTION, A CONNECTION EQUIVALENT TO A STANDARD CONNECTION SHALL BE PROVIDED.
- 4. BEARING ENDS OF COLUMNS SHALL BE FINISHED.
- 5. ALL WELDS SHALL BE MADE WITH E70XX ELECTRODES. WELDS SHALL BE 1/4" FILLET UNLESS OTHERWISE NOTED.
- 6. CONTRACTOR SHALL LOCATE EXISTING REINFORCEMENT PRIOR TO THE INSTALLATION OF POST INSTALLED CONCRETE ANCHORS. DO NOT DAMAGE ANY EXISTING REINFORCEMENT.
- 7. BEARING PADS SHALL BE SA-47 RANDOM FIBER (ROF) PADS AS MANUFACTURED BY FABREEKA OR APPROVED EQUAL. ADHERE BEARING PADS TO THE CONCRETE SUBSTRATE WITH #700 EPOXY ADHESIVE MANUFACTURED BY FABREEKA OR APPROVED EQUAL.

COLUMN BASE PLATE GROUT:

- 1. ALL GROUT FOR COLUMN BASE PLATES SHALL BE ASTM C1107 NON-METALLIC, NON-SHRINK GROUT INSTALLED PER MANUFACTURER'S SPECIFICATIONS. THICKNESS SHALL BE 1" UNLESS OTHERWISE NOTED ON DRAWINGS.
- 2. MINIMUM 28 DAY COMPRESSIVE STRENGTH FOR GROUT SHALL BE 7000 PSI.

ABBREVIATIONS:

В	12/07/18	RE-ISSUED FOR REVIEW	JWO	
Α	11/30/18	ISSUED FOR REVIEW	JWO	
REV.	DATE	DESCRIPTION	APP'D.	

315 LEMAY FERRY RD. SAINT LOUIS, MO. 63125 314-833-5610 **STL Engineering, LLC**

DAY AND NIGHT SOLAR ST. LOUIS, MO 63110

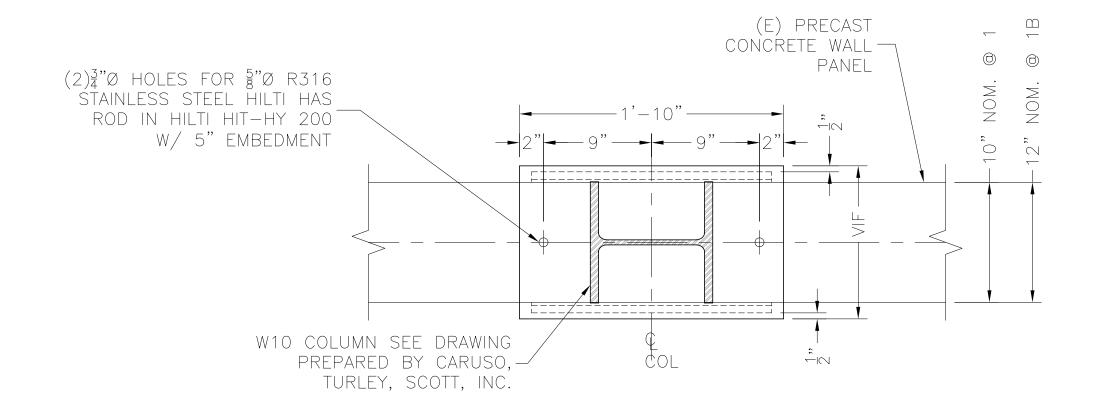
PROJECT:

BJC CAMPUS PARKING SOLAR PROJECT 4456 DUNCAN AVENUE STRUCTURAL

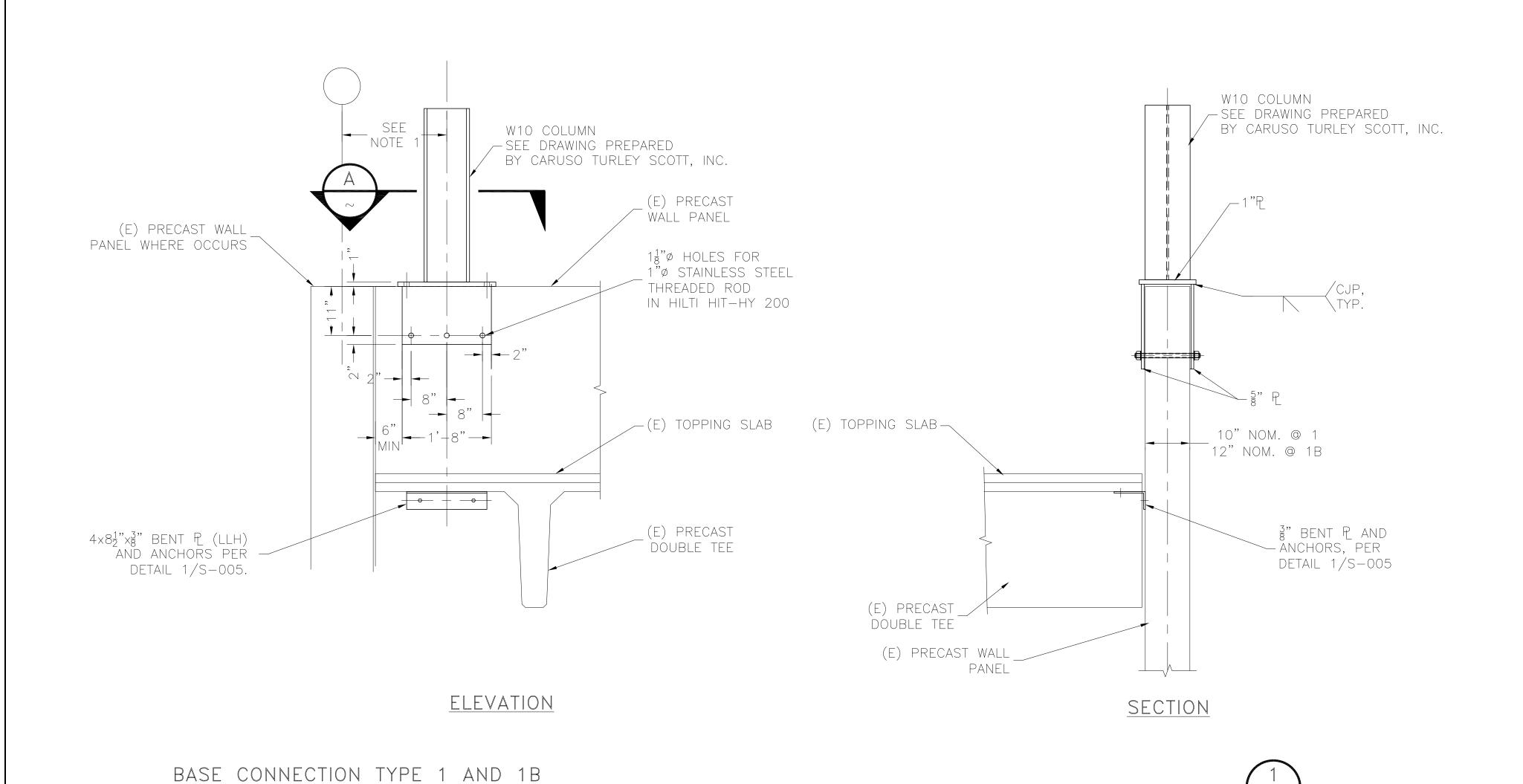
COVER SHEET - GENERAL NOTES & SHEET INDEX drawn: DEC DATE: 11/30/18 scale: NTS STL PROJECT #: STL.18.1628 CLIENT PROJECT # DRAWING NUMBER # REV. # 1628-C-001

CORP. CERT. OF AUTHORITY #E-2014009680

SEAL:







SCALE: 3/4" = 1'-0"

PRELIMINARY

NOTES:

1. SEE ROOF FRAMING PLAN PREPARED BY CARUSO TURLEY INC. FOR COLUMN LOCATIONS.

2. REFERENCE NOTES ON SHEET C-001 FOR ADDITIONAL

3. LOCATE EXISTING REINFORCEMENT PRIOR TO FABRICATION AND ANCHOR INSTALLATION, DO NOT DAMAGE EXISTING REINFORCEMENT.

4. USE UP TO $\frac{3}{4}$ " OF NON SHRINK GROUT AS REQUIRED TO LEVEL BASE PLATE.

В	12/07/18	RE-ISSUED FOR REVIEW	JWO
Α	11/30/18	ISSUED FOR REVIEW	J.W.O.
REV.	DATE	DESCRIPTION	APP'D.

315 LEMAY FERRY RD.
SUITE 129
SAINT LOUIS, MO. 63125
314-833-5610 STL Engineering, LLC

DAY AND NIGHT SOLAR ST. LOUIS, MO 63110

PROJECT:

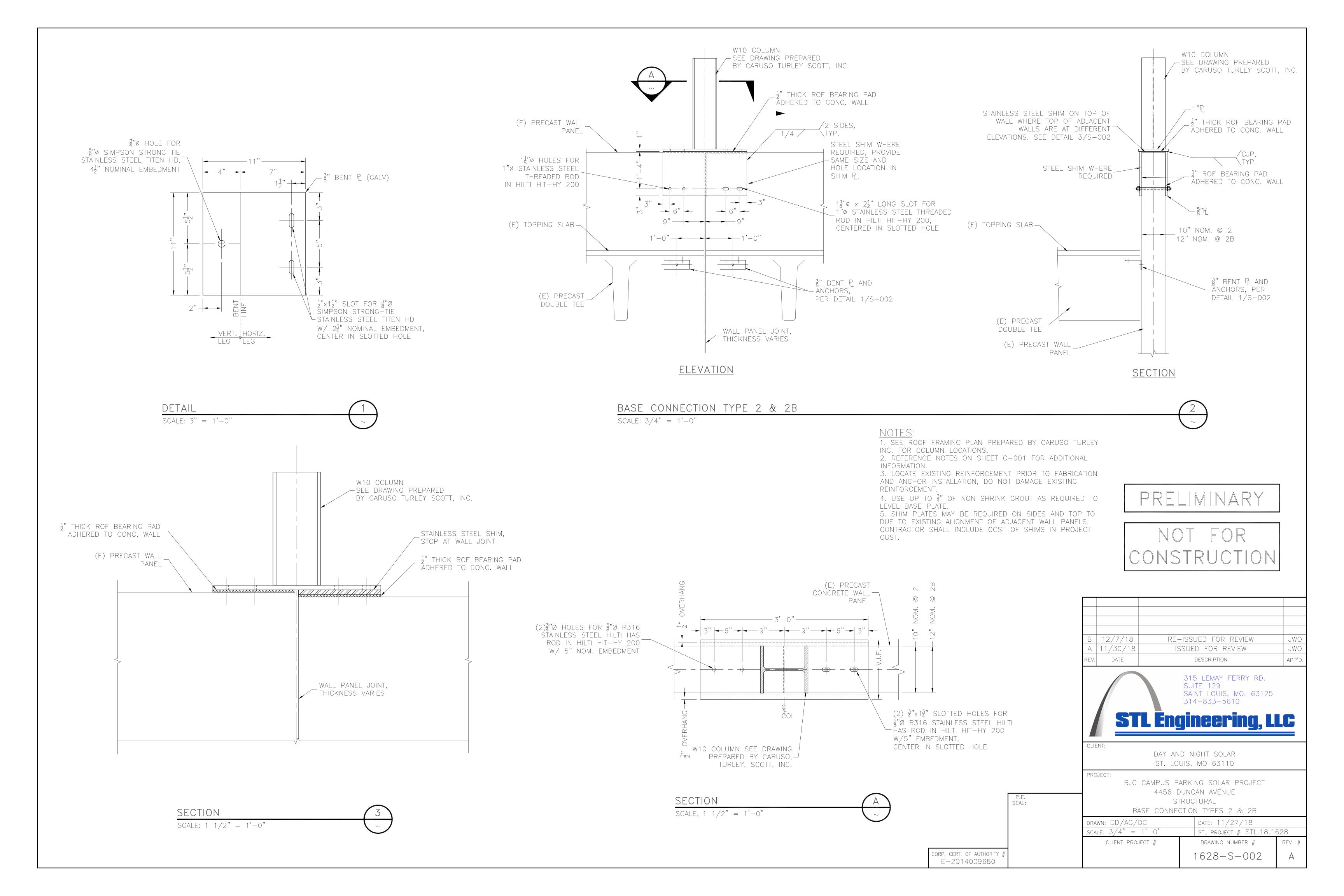
BJC CAMPUS PARKING SOLAR PROJECT 4456 DUNCAN AVENUE STRUCTURAL BASE CONNECTION TYPE 1

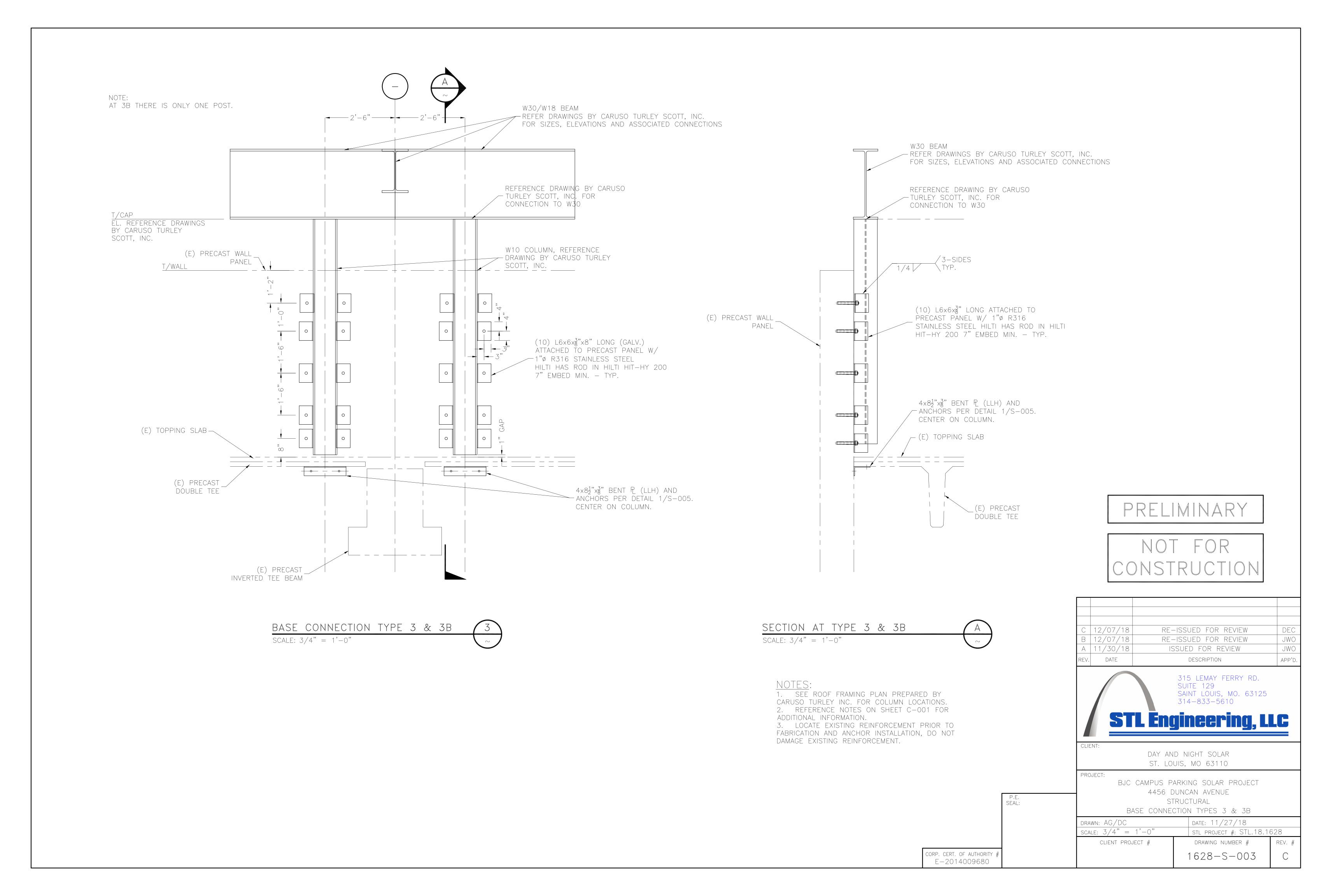
DATE: 11/27/18 drawn: DEC SCALE: 3/4" = 1'-0"CLIENT PROJECT # DRAWING NUMBER #

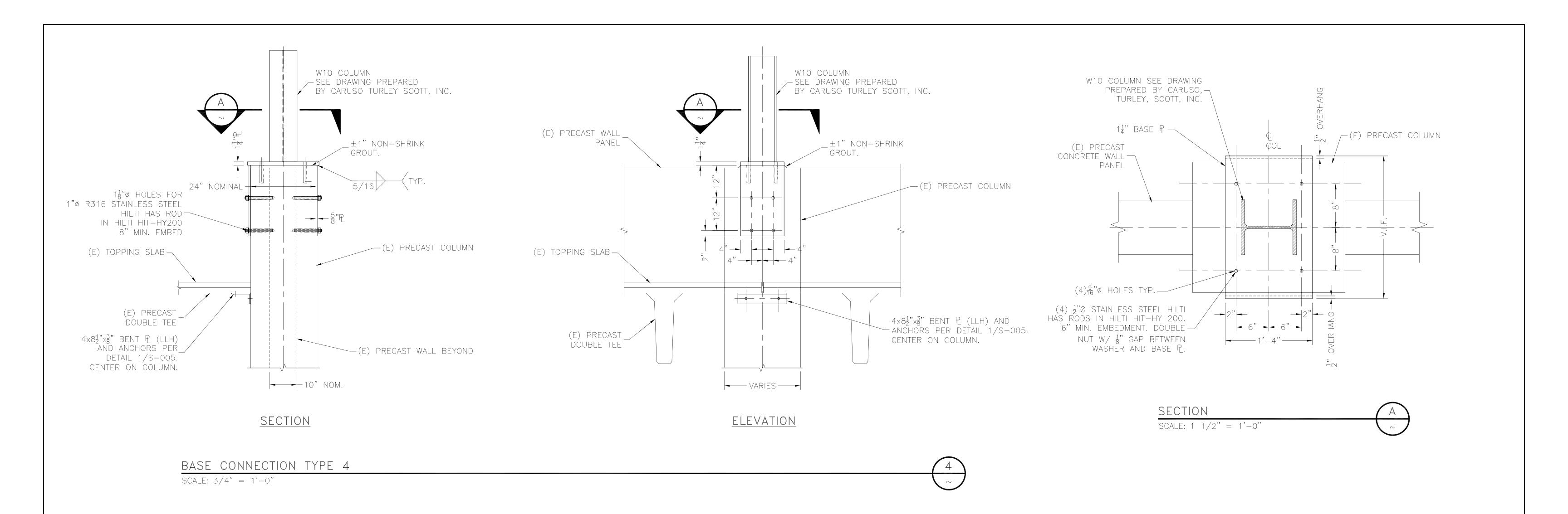
P.E. SEAL:

CORP. CERT. OF AUTHORITY # E-2014009680

STL PROJECT #: STL.18.1628 REV.# 1628-S-001







NOTES:

1. SEE ROOF FRAMING PLAN PREPARED BY CARUSO TURLEY INC. FOR COLUMN LOCATIONS.

2. REFERENCE NOTES ON SHEET C-001 FOR ADDITIONAL INFORMATION.
3. LOCATE EXISTING REINFORCEMENT PRIOR TO FABRICATION AND ANCHOR INSTALLATION,

DO NOT DAMAGE EXISTING REINFORCEMENT.

PRELIMINARY

NOT FOR CONSTRUCTION

