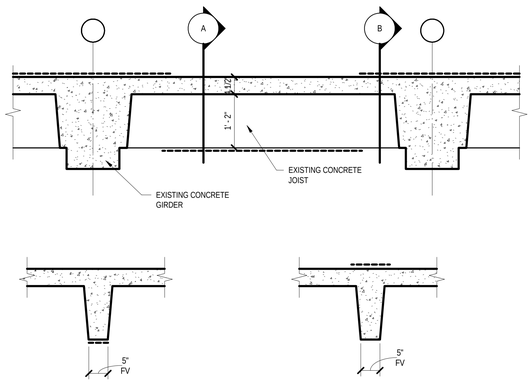


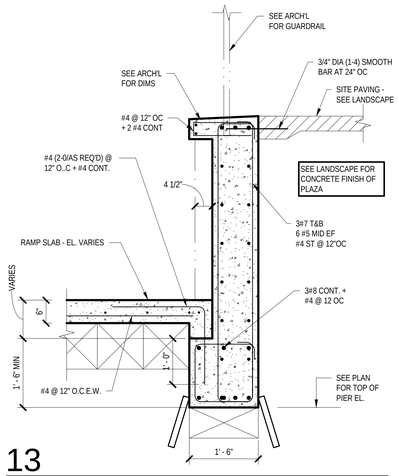
SECTION A

SECTION B

21
3/4" = 1'-0"

CARBON FIBER REINFORCED POLYMER (CFRP):

1. FIBER WRAP DESIGN TO BE BY CONTRACTOR'S FIBER WRAP ENGINEER. SEE 15/S3-10 FOR REQUIRED MOMENT CAPACITIES. SUBMIT SIGNED AND SEALED DESIGN CALCULATIONS AND DETAILS TO ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION.
2. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY CONDITIONS DIFFERENT THAN SHOWN ON THE DESIGN DOCUMENTS.
3. CUTTING, GRINDING AND REMOVAL WORK SHALL BE PERFORMED SO AS NOT TO REMOVE MORE THAN NECESSARY OR DAMAGE ADJACENT WORK.
4. PROTECT SURFACES THAT ARE TO REMAIN AS PART OF THE FINISHED WORK FROM DAMAGE.
5. THE CFRP COMPOSITE SYSTEM SHALL HAVE A CURRENT ICC EVALUATION REPORT AND SHALL BE INSTALLED ACCORDING TO THE DESIGN DOCUMENTS, MANUFACTURER'S AND ICC RECOMMENDATIONS AND PROCEDURES.
6. THE SURFACE TO RECEIVE THE COMPOSITE SHALL BE PREPARED ACCORDING TO INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) CONCRETE SURFACE PROFILE OF CSP 3, ICRI GUIDELINE NO. 03732.
7. THE SURFACE TO RECEIVE THE COMPOSITE SHALL BE TESTED FOR MOISTURE CONTENT PRIOR TO INSTALLATION OF CFRP AND SHALL MEET THE MANUFACTURER'S RECOMMENDATIONS.
8. ROUND OFF SHARP AND CHAMFERED CORNERS OF BEAM TO A RADIUS OF ONE-HALF (1/2) INCH BY MEANS OF GRINDING OR FORMING WITH THE APPROVED SYSTEM'S THICKENED EPOXY.
9. CFRP BASIS OF DESIGN:
   A. SIKAWRAP HEX 103C WITH SIKADUR HEX 300 EPOXY (OR EQUAL)
   B. DESIGN TENSILE STRENGTH IN PRIMARY FIBER DIRECTION = 153 KSI
   C. DESIGN ELONGATION AT BREAK = 1.0 %
   D. DESIGN TENSILE MODULUS = 9,400 KSI
   E. LAMINATE THICKNESS = 0.04 INCH
10. CFRP TESTING REQUIREMENTS:
   A. PERFORM PULL-OFF ADHESION TEST ACCORDING TO ASTM D7522/D7522M-09 TO VERIFY 200 PSI MINIMUM TENSILE STRENGTH OF THE SUBSTRATE PRIOR TO APPLICATION OF THE COMPOSITE SYSTEM.
      i. SURFACE PREPARATION SHALL BE OBSERVED PRIOR TO APPLICATION OF THE COMPOSITE SYSTEM AND PULL-OFF ADHESION TEST PROCEDURE.
      ii. TEST PANELS FOR PULL-OFF ADHESION TESTING SHALLL BE INSTALLED AT THE SAME TIME AND SHALL BE LOCATED IN THE SAME AREA AS THE CFRP.
      iii. ONE SET OF PULL-OFF ADHESION TEST SHALL OCCUR EACH DAY THAT THE CFRP IS APPLIED. EACH SET SHALL CONSIST OF THREE (3) INDIVIDUAL PULLS.
      iv. PULL-OFF ADHESION TEST REPORTS SHALL AT A MINIMU INCLUDE BOND STRENGTH, FAILURE MODE, AND LOCATION OF TEST.
11. CFRP SYSTEM SHALL RECEIVE A FOUR (4) HOUR FIRE RESISTANT COATING OF A CEMENT-BASED AND WET-SPRAY APPLIED PROTECTION MORTAR MEETING OR EXCEEDING THE REQUIREMENTS OF SIKACRETE-213F. SURFACE PREPARATION, MIXING, APPLICATION, AND CURING PROCEDURES SHALL MEET THE MANUFACTURER'S RECOMMENDATIONS.
12. ALL PRODUCTS AND COMPLETE CFRP APPLICATION PROCEDURE MUST BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO START OF WORK.



13
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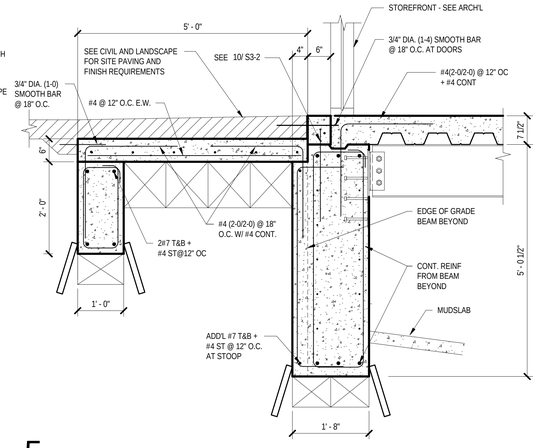

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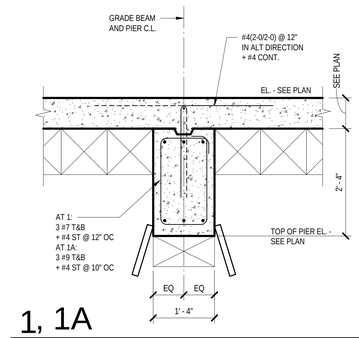
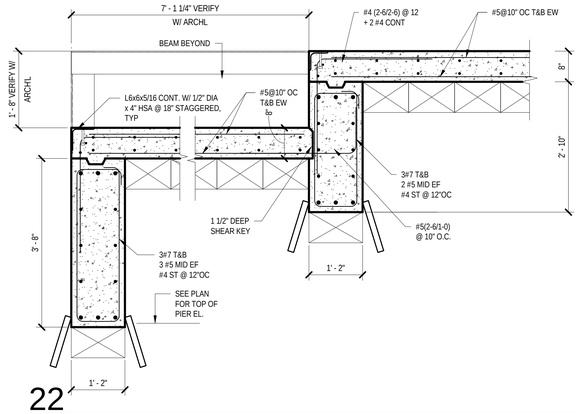


1, 1A
3/4" = 1'-0"



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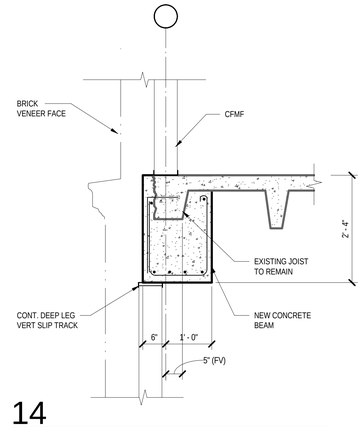

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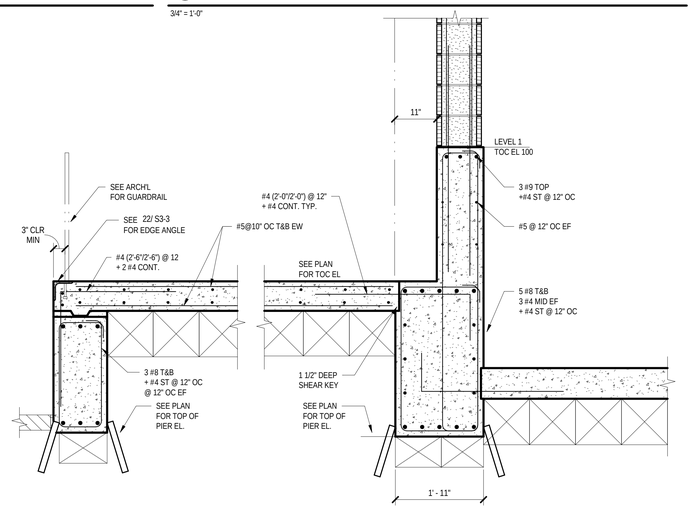

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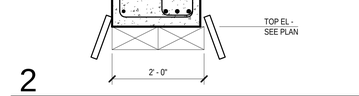

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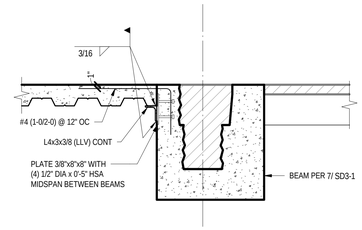

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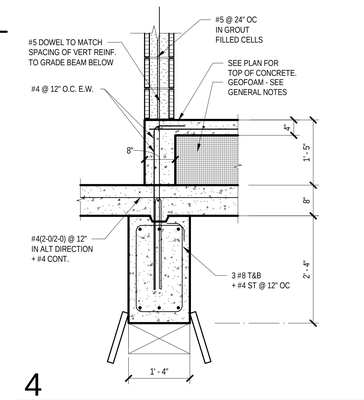

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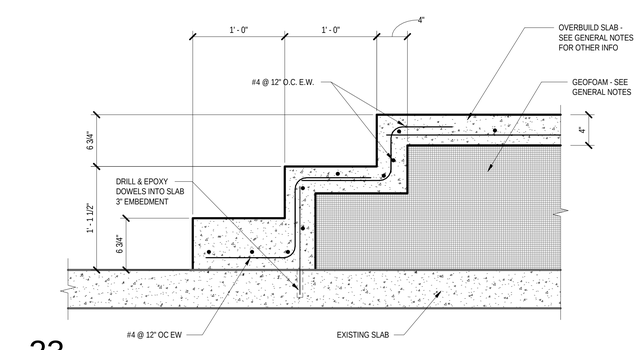

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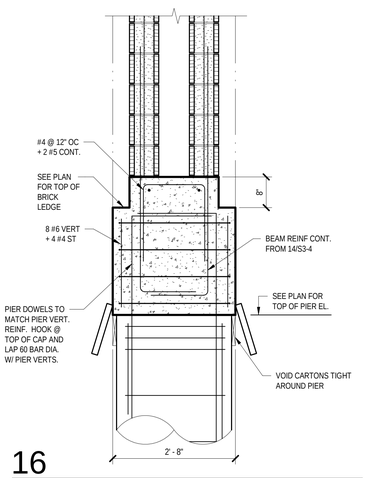

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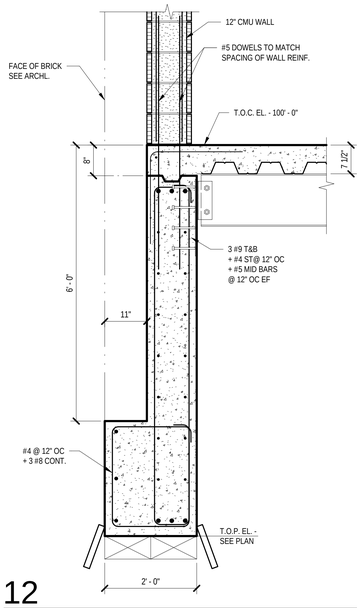

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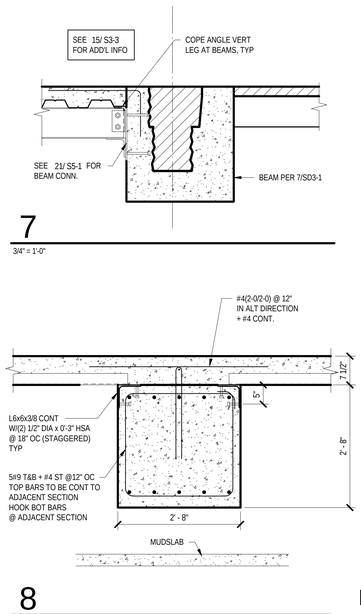

7
3/4" = 1'-0"

8
3/4" = 1'-0"

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11-30-2017

TEXAS WOMENS UNIVERSITY HUBBARD HALL ADDITION AND RENOVATION - STUDENT UNION DENTON, TEXAS

PROJECT #: 16032-00	MANAGER: PFE
ISSUED FOR: 100% CD	DRAFTER: PFE
DATE: NOVEMBER 30, 2017	CHECKED: PFE

CONCRETE DETAILS

SHEET
S3-3
OF SHEETS

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