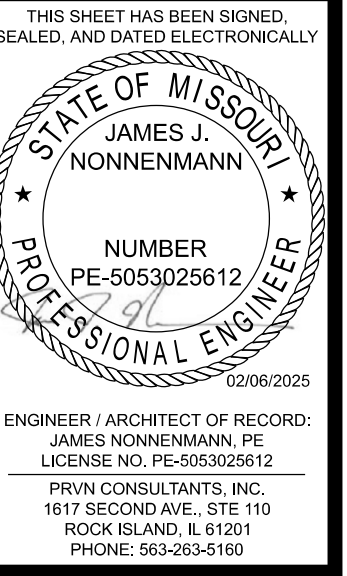


UNIVERSITY OF MISSOURI - COLUMBIA GENERAL SITE - REPLACE UTILITIES NEAR MEMORIAL UNION PROJECT NUMBER: CP230201

AT: UNIVERSITY OF MISSOURI - COLUMBIA, MISSOURI
FOR: THE CURATORS OF THE UNIVERSITY OF MISSOURI
ISSUED FOR ADDENDUM 1: 02/06/2025

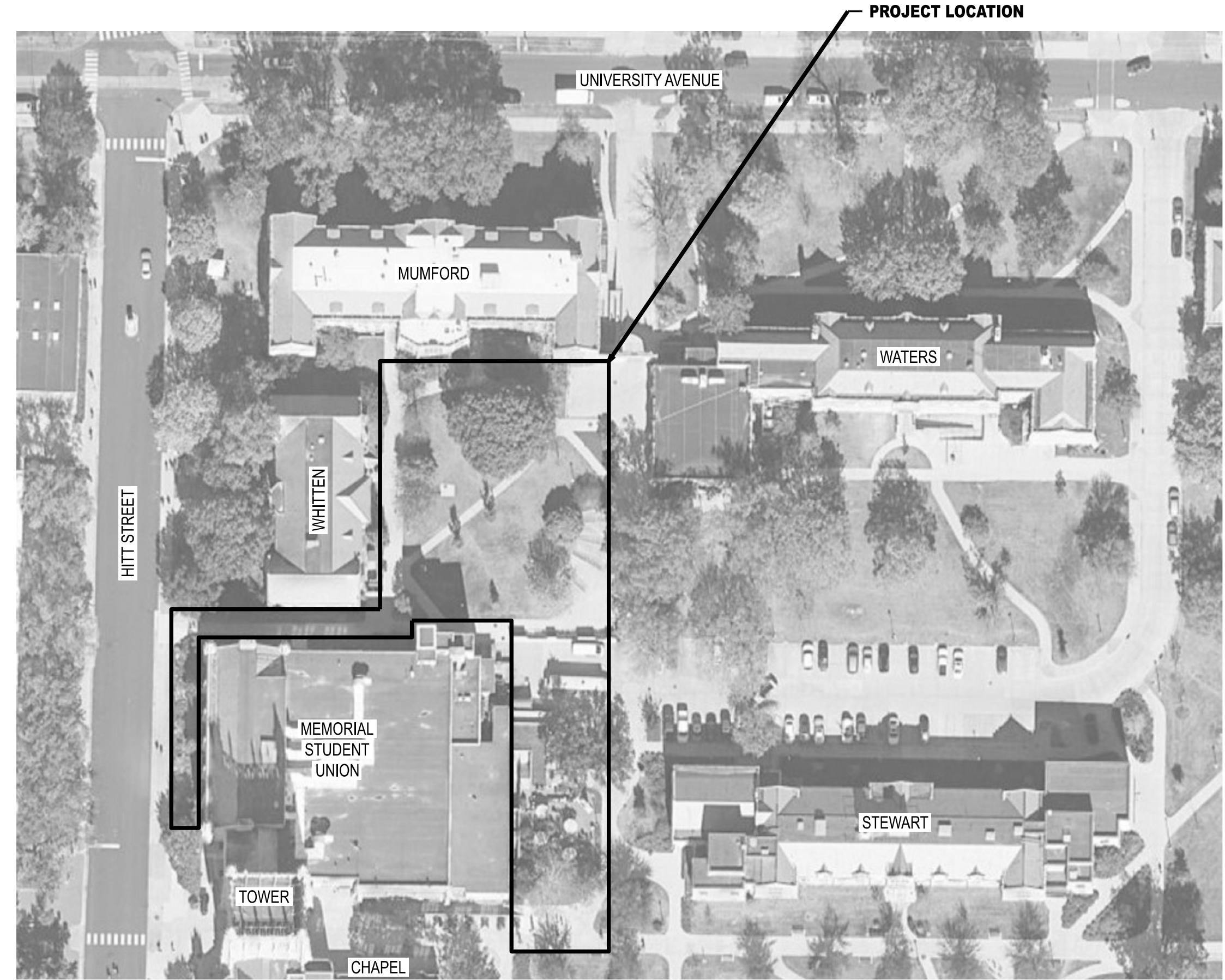


SPECIAL INSPECTIONS (IBC CHAPTER 17):

- 1) All concrete waterproofing shall be fully placed and inspected by the owner prior to proceeding to the next step of installation. Owner shall receive 24 hour notice of inspections being required. These inspections for approval shall include:
 - a) Substrate conditions and preparations
 - b) Flashing installation
 - c) Membrane installation
 - d) Protection and drainage installation
 - 2) The owner will contract with an independent testing firm to complete ultrasonic shear wave weld inspections on owner selected field welds. If the results of these tests indicate poor quality welds, those "failed" welds shall be replaced at no additional cost to the project. If further ultrasonic inspection is required to assure quality weld workmanship, these tests shall be at the expense of the contractor, and any and all defective welds shall be replaced at no additional cost to the project.
 - 3) Placing of concrete and reinforcing steel (continuous of concrete sampling / periodic of reinforcing).
 - 4) In-situ soils, excavations, filling, and compaction (periodic).
- The contractor shall request special inspection of the items listed above prior to those items becoming inaccessible and unobservable due to progression of the work.

DELEGATED DESIGN:

Contractor is responsible for the design of shoring, earth retention systems, temporary excavations support, existing utility protection systems, and associated items as needed to facilitate completion of this work. Design shall be completed by a licensed professional structural engineer registered in the State of Missouri. Designs shall be submitted to review by project engineer.



INDEX OF DRAWINGS

REV. NO.	SHEET NO.	DRAWING INDEX
		DESCRIPTION
GENERAL DRAWINGS		
1	G000	COVER SHEET, PROJECT LOCATION PLAN AND DRAWING INDEX
CIVIL DRAWINGS		
0	CE 1	EXISTING SITE PLAN AND CIVIL NOTES
1	CE 2	DEMOLITION PLAN
1	CE 3	STORM SEWER PLAN
0	CE 4	STORM SEWER LINE 1 PROFILE AND DETAILS
0	CE 5	WATERLINE PLAN
0	CE 6	STEAM CHASE LOCATION PLAN
1	CE 7	SITE PLAN
0	CE 8	GRADING AND EROSION CONTROL PLAN
0	CE 9	PHASING PLAN - PHASE 1
0	CE 10	PHASING PLAN - PHASE 2
0	CE 11	WATERLINE CONSTRUCTION DETAILS
0	CE 12	PHASE 1 TRAFFIC CONTROL PLAN - HITT STREET
DEMOLITION DRAWINGS		
0	D100	OVERALL DEMOLITION SITE PLAN
0	D110	SMH-101 DEMOLITION PLAN
1	D101	ELECTRICAL DEMOLITION SITE PLAN
MECHANICAL DRAWINGS		
0	M000	MECHANICAL NOTES AND PHASING NOTES
0	M001	MECHANICAL SYMBOLS AND ABBREVIATIONS
0	M002	MECHANICAL SUPPORTS - SYMBOLS, NOTES, AND LEGEND
1	M100	OVERALL MECHANICAL SITE PLAN
0	M110	SMH-101 PLAN AND SECTIONS
0	M120	WHITTEN HALL AND MUMFORD HALL MECHANICAL PLAN
0	M130	EAST ADA RAMP GLYCOL PIPING
0	M140	THERMAL EXPANSION PLAN - SHEET 1
0	M141	THERMAL EXPANSION PLAN - SHEET 2
0	M150	MECHANICAL DETAILS
STRUCTURAL DRAWINGS		
1	S100	EAST ADA RAMP MODIFICATIONS
0	S101	SMH-101 PLAN & DETAILS
1	S110	TYPICAL REPAIR DETAILS & NOTES
ARCHITECTURAL DRAWINGS		
0	A100	WATERPROOFING EXTERIOR ELEVATION
0	A200	WATERPROOFING DETAILS
0	A300	RAMP GUARDRAIL AND SCREEN
ELECTRICAL DRAWINGS		
1	E101	ELECTRICAL SITE PLAN
0	E200	ELECTRICAL DETAILS

OWNER'S REPRESENTATIVE:

M BRANDON REDINGTON
112 GENERAL SERVICES BUILDING
COLUMBIA, MO 65211
573-405-0083
PROJECT CP230201

DESIGN CONSULTANTS:

MECHANICAL AND ELECTRICAL
PRVN CONSULTANTS, INC.
1617 SECOND AVE. SUITE 110
ROCK ISLAND, IL 61201
563.263.5160
PROJECT 24084



STRUCTURAL AND CIVIL
CROCKETT ENGINEERING CONSULTANTS
1000 W NIFONG BLVD, BUILDING 1
COLUMBIA, MO 65203
573.447.0292
PROJECT xxxxx



ARCHITECT
INTERNATIONAL ARCHITECTS ATELIER
912 BROADWAY BLVD, SUITE 300
KANSAS CITY, MO 64105
816.471.6522

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UNIVERSITY OF MISSOURI - COLUMBIA
 GENERAL SITE - REPLACE UTILITIES
 NEAR MEMORIAL UNION
 COLUMBIA, BOONE COUNTY, MISSOURI 65203
 COVER SHEET, PROJECT LOCATION PLAN
 AND DRAWING INDEX

UNIVERSITY OF MISSOURI
PROJECT NUMBER

CP230201

CONSULTANT
PROJECT NUMBER

24084

SHEET

G000

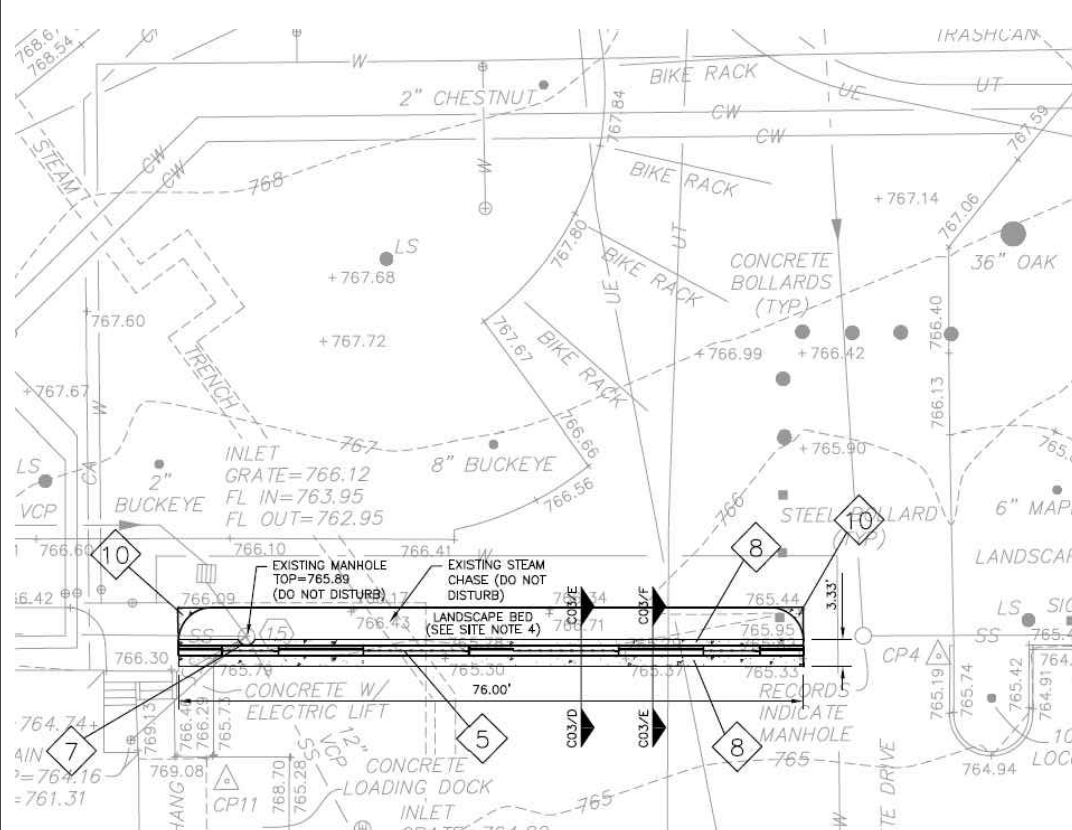
ISSUED FOR ADDENDUM 1
 02/06/25
 ISSUED FOR BID
 01/10/25
 DRAWN BY: J.J.N.
 CHECKED BY: M.A.O.

LEGEND OF LABELS

- (A) REMOVE EXISTING CONCRETE PAVEMENT FOR UTILITY CONSTRUCTION AS SHOWN. EXACT PAVEMENT REMOVAL LIMITS SHALL BE TO NEAREST SAW JOINT IN CONCRETE PAVEMENT. PROVIDE CLEAN, FULL DEPTH SAW CUT IN EXISTING PAVEMENT TO REMAIN TO PROVIDE A CLEAN CONNECTION TO THE NEW PAVEMENT.
- (B) REMOVE EXISTING BROKEN CONCRETE SIDEWALK PANELS AS SHOWN. EXACT PAVEMENT REMOVAL LIMITS SHALL BE TO NEAREST SAW JOINT IN CONCRETE PAVEMENT. PROVIDE CLEAN, FULL DEPTH SAW CUT IN EXISTING PAVEMENT TO REMAIN TO PROVIDE A CLEAN CONNECTION TO THE NEW PAVEMENT. COORDINATE WITH OWNER ON WHICH EXACT PANELS ARE TO BE REMOVED.
- (C) EXISTING TREE/LANDSCAPE AREA TO BE REMOVED AS REQUIRED FOR UTILITY WORK. ALL TREES, MULCH, PLANTS, BUSHES, ETC. TO BE DISPOSED OF OFF-SITE. REMOVE ENTIRE ROOT BALL OF TREES.
- (D) EXISTING TREE TO BE PROTECTED. REFER TO TREE PROTECTION FENCING PLAN ON CE 9 & CE 10.
- (E) EXISTING DOWNSPOUT COLLECTOR AND LEADERS TO DOWNSPOUTS TO BE REMOVED AS SHOWN. REFER TO NEW PLAN FOR REPLACEMENT.
- (F) EXISTING STORM SEWER TRENCH DRAIN TO BE SALVAGED AND REINSTALLED IN REBUILT RAMP.
- (G) EXISTING CONCRETE RAMP WITH WALLS TO BE REMOVED AS SHOWN.
- (H) EXISTING RAILING TO BE REMOVED.
- (J) EXISTING DOOR OPENER TO BE SALVAGED FOR REINSTALLATION.
- (K) REMOVE AND REPLACE FENCE AS NEEDED.
- (L) WORK AROUND PORTION OF EXISTING WALL FOR UTILITY CONSTRUCTION AS NEEDED. INTENT OF ORIGINAL WALL DESIGN INCLUDED GAP IN FOOTING TO ALLOW FOR ACCESS TO STEAM CHASE. NOTIFY OWNER IF ANY PART OF THE WALL OR FOOTING MUST BE REMOVED AND REPLACED. REFER TO ORIGINAL CONSTRUCTION DETAIL FOR REFERENCE ON THIS SHEET.
- (M) REMOVE EXISTING BENCH DURING DEMOLITION AND STORE FOR REINSTALLATION AFTER NEW PAVEMENT HAS BEEN INSTALLED.
- (N) EXISTING SMALL BLOCK WALL TO BE REMOVED AND REPLACED AS NEEDED FOR CHASE CONSTRUCTION.
- (O) EXISTING GAS FIREPLACE TO REMAIN.
- (P) SALVAGE PORTION OF BRICK PAVEMENT AREA FOR CHASE LID CONSTRUCTION. REINSTALL PAVERS TO MATCH EXISTING CONDITIONS.
- (Q) CART CHARGING STATION TO REMAIN.
- (R) EXISTING STORM STRUCTURE TO REMAIN.
- (S) REMOVE EXISTING STORM PIPING AS SHOWN.
- (T) REMOVE EXISTING STORM STRUCTURE.
- (U) PROTECT EXISTING DOWNSPOUT AND VENT WELL LINES FROM BUILDING TO REMOVED STORM SEWER. CONTRACTOR SHALL ALLOW OWNER TO INSPECT CONDITION OF EXISTING LINES FROM BUILDING. A CHANGE ORDER MAY BE ISSUED TO REPLACE ANY DAMAGED PIPING AS ENCOUNTERED. LINES WILL BE RECONNECTED TO REPLACEMENT STORM SEWER.
- (V) EXISTING ICE MELT SYSTEM TO BE REMOVED AND REPLACED IN NEW SIDEWALK. REFER TO MEP PLANS.

GENERAL DEMOLITION NOTES:

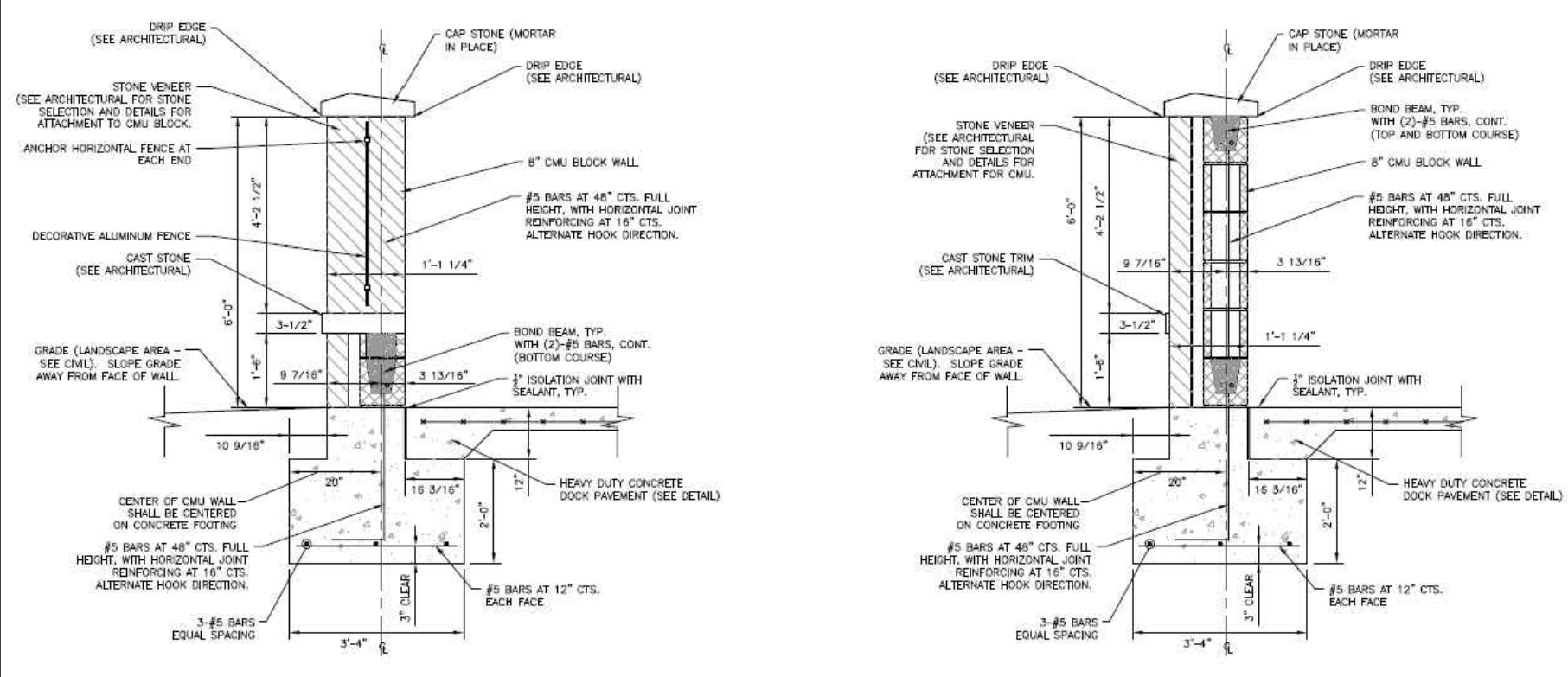
1. CONTRACTOR SHALL TAKE CAUTION TO PROTECT EXISTING UTILITIES THAT ARE TO REMAIN.
2. CERTAIN AREAS MAY BE REQUIRED TO BE REMOVED IN PHASES. CONTRACTOR TO COORDINATE TIMING WITH OWNER.
3. ITEMS OUTSIDE CONSTRUCTION LIMITS OR CALLED OUT TO REMAIN SHALL BE PROTECTED AS REQUIRED. CONTRACTOR SHALL REPAIR/REPLACE DAMAGED ITEMS OUTSIDE PROJECT SCOPE OF WORK AT NO EXPENSE TO THE OWNER.
4. CONCRETE TO BE REMOVED TO THE NEAREST SAW JOINT, BUT NOT LESS THAN THE DEMOLITION LIMITS SHOWN ON THE PLAN.
5. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO DISCONNECTING ANY UTILITIES.



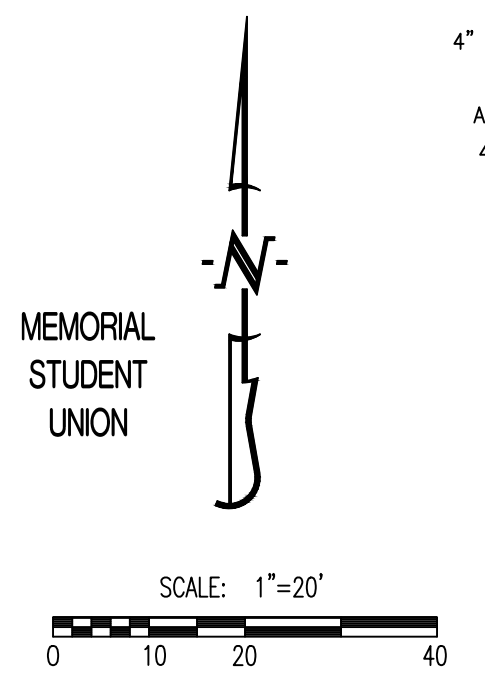
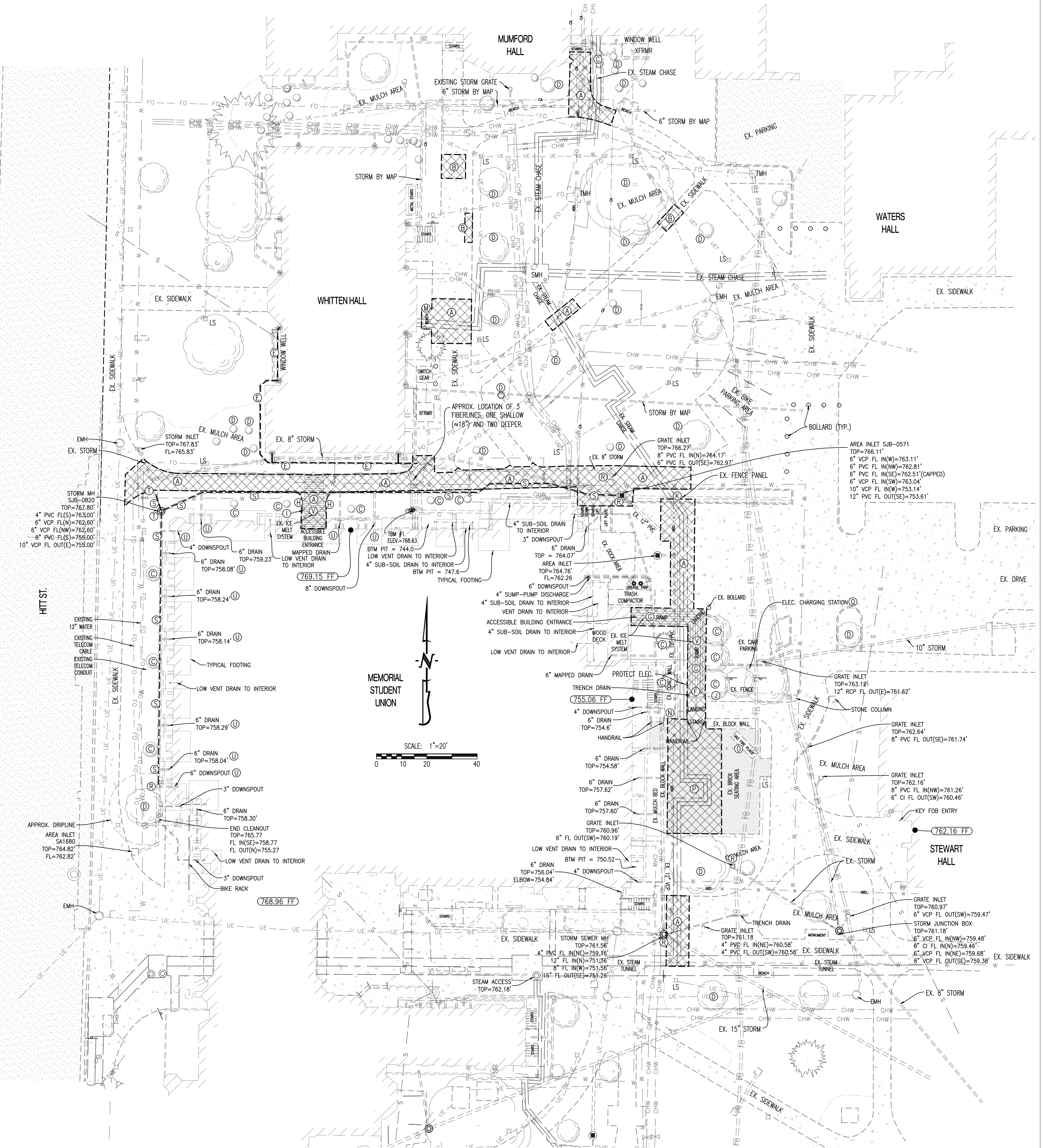
ORIGINAL WALL CONSTRUCTION PLAN (FOR REFERENCE)

- KEYED NOTES**
- (NEW TRANSFORMER AND PAD (SEE ELECTRICAL))
 - (NEW UNDERGROUND ELECTRIC DUCTBANK (SEE ELECTRICAL FOR ROUTING))
 - (PORTABLE EXISTING UTILITIES TO CONFORM POTENTIAL CONFLICTS)
 - (SCREEN FENCE AND GATE - SEE ADD FOR SCREEN FENCE/GATE PRODUCT INFORMATION)
 - (STONE/CLAY AND FENCE PANEL SCREEN WALL (SEE DRAWING C03))
 - (EXISTING STEAM CHASE UNDER ALTERNATE #1 - NEW SCREEN WALL - PROTECT EXISTING STEAM CHASE)
 - (CAST WALL FOOTING AROUND MANHOLE)
 - (SCREEN WALL FOOTING (BELOW GRADE))
 - (REMOVE ANY CHASE TO REPAIR/REPLACE WALL AS A RESULT OF REMOVAL AND REINSTALLATION OF UNDERGROUND ELECTRIC)
 - (NEW SIDEWALK - FROM PAVED AND UNPAVED AREAS OF REMOVED LANDSCAPE ISLAND)
 - (ELEVATOR ADDITION - SEE ARCHITECTURAL)
 - (ELECTRICAL TO STOP AT AREA THAT WALL - NEW CONDUIT WILL SPIN ACROSS AREA WITH SUPPORTS (SEE ELECTRICAL DRAWINGS))
 - (WATER AT BUILDING WATER SERVICE USE - FOLLOW ALL STANDARDS FOR CONSTRUCTION. CONSTRUCT NEW MAIN TAP, GATE VALVE, AND WATER LINE)
 - (WATER LINE TO FUTURE AREA WITH WALL THROUGH AREA MAY, NEW INTO BUILDING. (SEE ELECTRICAL DRAWINGS FOR WATER LINE HEAT TREAT APPLICATION))
 - (NEW ADA COMPLIANT ENTRY RAMP)
 - (SEE ADD DETAIL V)

- LEGEND**
- (WE) MATCH EXISTING
 - (CONCRETE WALK (SEE C03A))



ORIGINAL WALL CONSTRUCTION DETAIL (FOR REFERENCE)



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI

PROFESSIONAL ENGINEER

ANDREW T. GREENE

NUMBER PE-202000043

MO LICENSE - PE-202000043

CROCKETT
ENGINEERING CONSULTANTS

02/06/25	ADDITION 01	ISSUE FOR BID	CHECKED BY: WTE
01/16/25			DRAWN BY: ATG

PRV CONSULTANTS, INC.
1617 SECOND AVE. STE. 110
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PHONE 562.263.9161
MISSOURI CERTIFICATE OF AUTHORITY ENGINEERING - 20201805

UNIVERSITY OF MISSOURI - COLUMBIA
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COLUMBIA, BOONE COUNTY, MISSOURI 65203

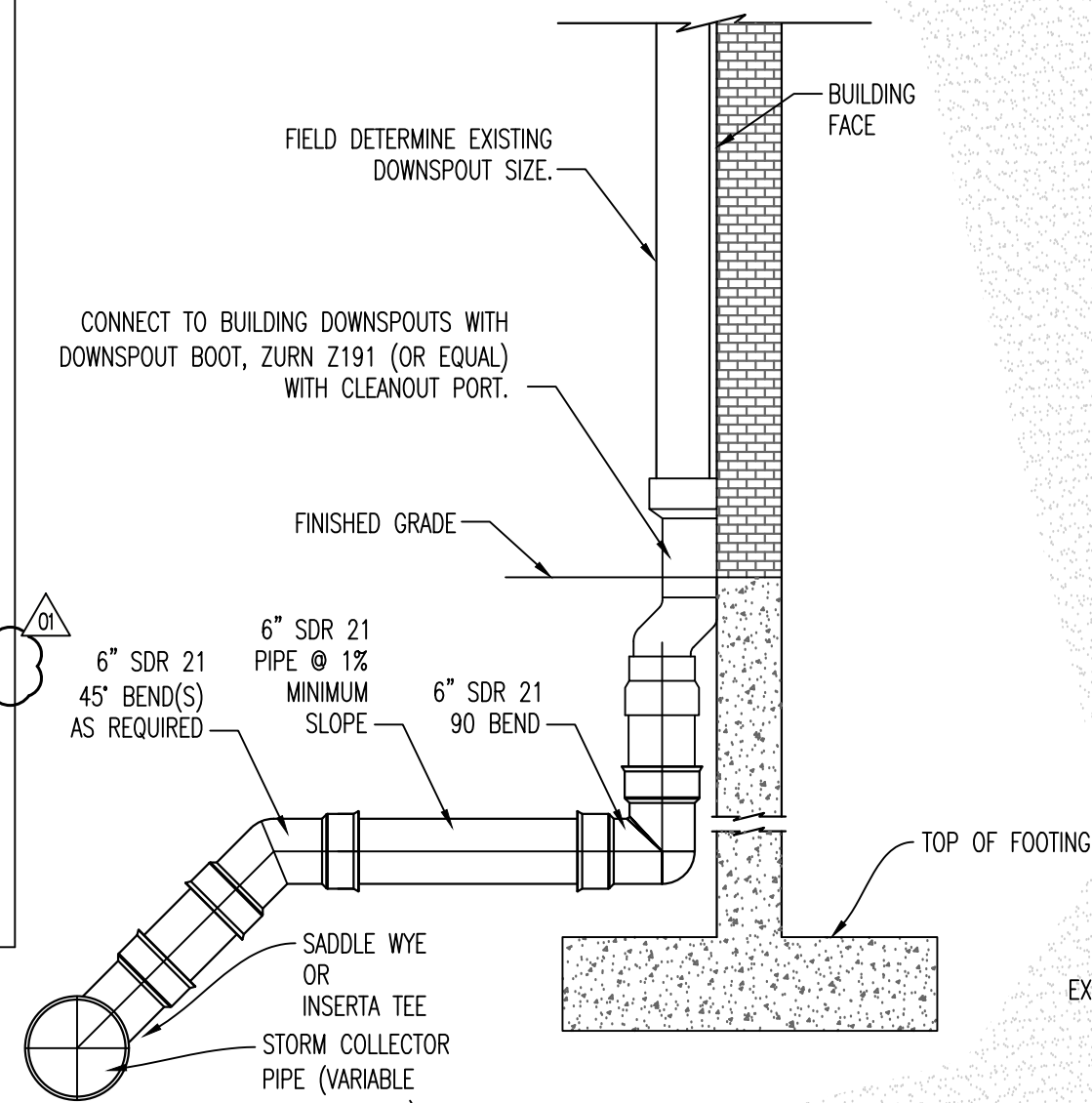
UNIVERSITY OF MISSOURI PROJECT NUMBER
CP230201
CONSULTANT PROJECT NUMBER
220449
SHEET
CE 2

LEGEND OF LABELS

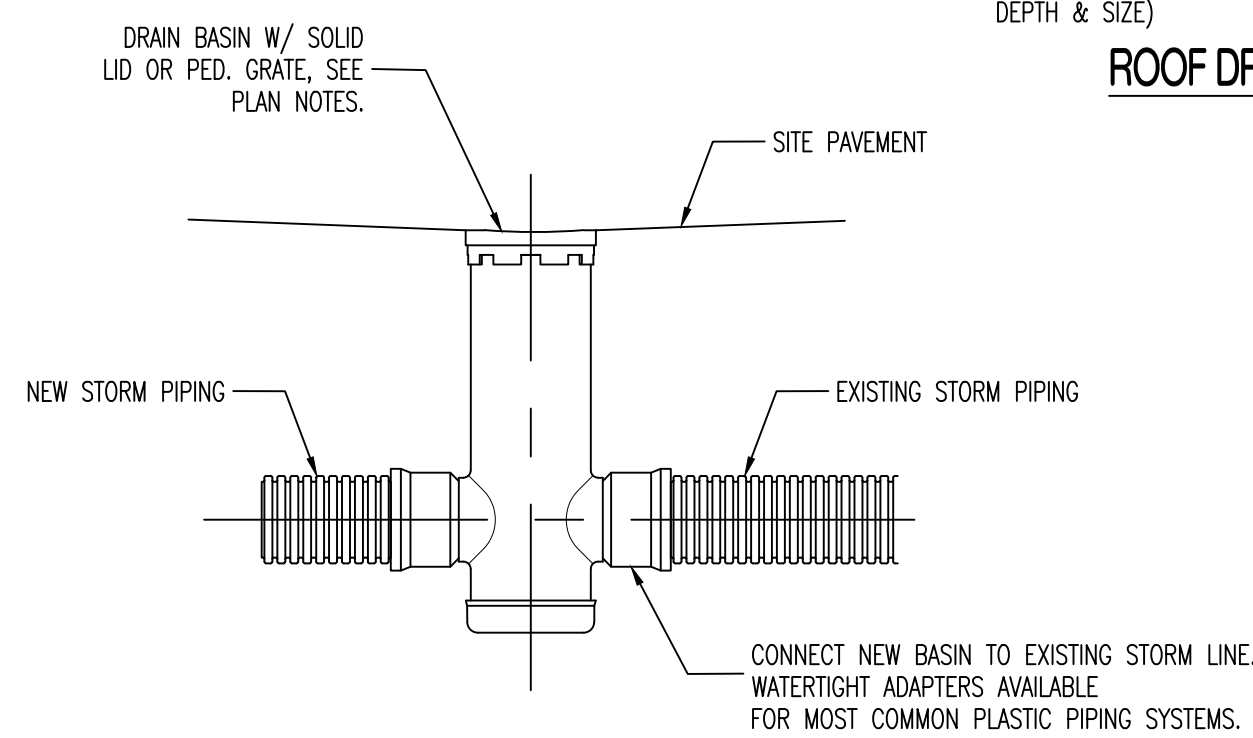
- (A) INSTALL 6" SDR 21 PVC DOWNSPOUT LEADERS @ 1.0% MINIMUM SLOPE AS SHOWN. CONNECT TO BUILDING DOWNSPOUTS WITH DOWNSPOUT BOOT, ZURN Z191 (OR EQUAL) WITH CLEANOUT PORT. WYE INTO COLLECTOR PIPE AS SHOWN. REFER TO DETAIL ON THIS SHEET.
- (B) INSTALL 8" SDR 21 PVC DOWNSPOUT COLLECTOR PIPING @ 1.0% MINIMUM SLOPE AS SHOWN. CONNECT TO NEW BASIN AS SHOWN. CONTRACTOR SHALL FIELD VERIFY FLOWLINE OF CONNECTION TO EXISTING PIPING. CONTRACTOR SHALL BEGIN INSTALLATION OF PIPING AT LOWEST POINT POSSIBLE (AT CONNECTION TO EXISTING PIPING AT NEW BASIN) AND RUN @ 1.0% SLOPE. IF 1.0% MINIMUM SLOPE IS NOT OBTAINABLE, CONSULT WITH ENGINEER. THE INTENT IS TO REPLACE THE PIPING IN PLACE WITHOUT ADJUSTMENT TO OTHER UTILITIES AND AT AN ALLOWABLE MINIMUM SLOPE.
- (C) EXISTING 8" STORM SEWER TO REMAIN TO CONNECT NEW PIPING AND BASIN TO. EXACT LOCATION IS UNKNOWN. CONTRACTOR SHALL FIELD VERIFY SIZE AND ALL FLOWLINE ELEVATIONS FOR NEW STORM SEWER.
- (D) INSTALL 18" NYLOPLAST DRAIN BASIN WITH H-20 SOLID LID IN-LINE OF EXISTING STORM SEWER LINE.
TOP = 768.40'
EXISTING FL IN NORTH = FIELD DETERMINE
NEW FL IN WEST = FIELD DETERMINE - 0.1' ABOVE FLOWLINE OUT.
EXISTING FL OUT EAST = FIELD DETERMINE
- (E) REINSTALL TRENCH DRAIN IN REBUILT RAMP.
- (F) INSTALL CLEANOUT EXTENSION ON STORM SEWER RUN AS SHOWN. REFER TO DETAILS ON THIS SHEET.
- (G) APPROXIMATE LOCATION OF 3 FIBER CROSSINGS, ONE SHALLOW (≈18") AND TWO DEEPER.
- (H) REMOVED.
- (I) RECONNECT EXISTING DOWNSPOUT AND VENT WELL LINES FROM BUILDING TO NEW STORM SEWER WITH MANUFACTURED ADAPTOR (INSERTA TEE, OR EQUAL). PERFORM CORING INTO NEW PIPING WITH CORE BIT TO CONNECT ADAPTOR. INSTALL PER MANUFACTURER'S INSTRUCTIONS. CONTRACTOR SHALL ALLOW OWNER TO INSPECT CONDITION OF THESE EXISTING LINES FROM BUILDING. CONTRACTOR TO PROVIDE UNIT PRICE WITH BIDDING DOCUMENTS TO PROVIDE LINING OF DRAIN LINES AS DETERMINED TO BE NEEDED BY THE OWNER FOLLOWING INSPECTION. LINING OF DRAIN LINES SHALL BE PERFORMED VIA CURED-IN-PLACE-PIPE (CIPP) METHOD, OR ENGINEER APPROVED EQUAL METHOD. A CHANGE ORDER MAY BE ISSUED TO REPLACE ANY DAMAGED PIPING UNSUITABLE FOR LINING.
- (J) INSTALL 4" PERFORATED SDR 21 PVC FOUNDATION DRAIN AT 0.5% SLOPE TO GENERALLY FOLLOW STORM SEWER GRADE AS SHOWN ON PLAN. INSTALL 1" CLEAN ROCK BETWEEN WATERPROOFED BUILDING AND PERFORATED DRAIN PER DIAGRAM ON SHEET A200. INSTALL GEOTEXTILE FILTER FABRIC BETWEEN GRANULAR MATERIAL AND SOIL TO PREVENT DRAIN CLOGGING. TERMINATE PERFORATED PIPE IN AREA WELL WITH LAMBS TONGUE ON INSIDE OF AREA WELL.

UTILITY PROTECTION DURING SHORING/EXCAVATION

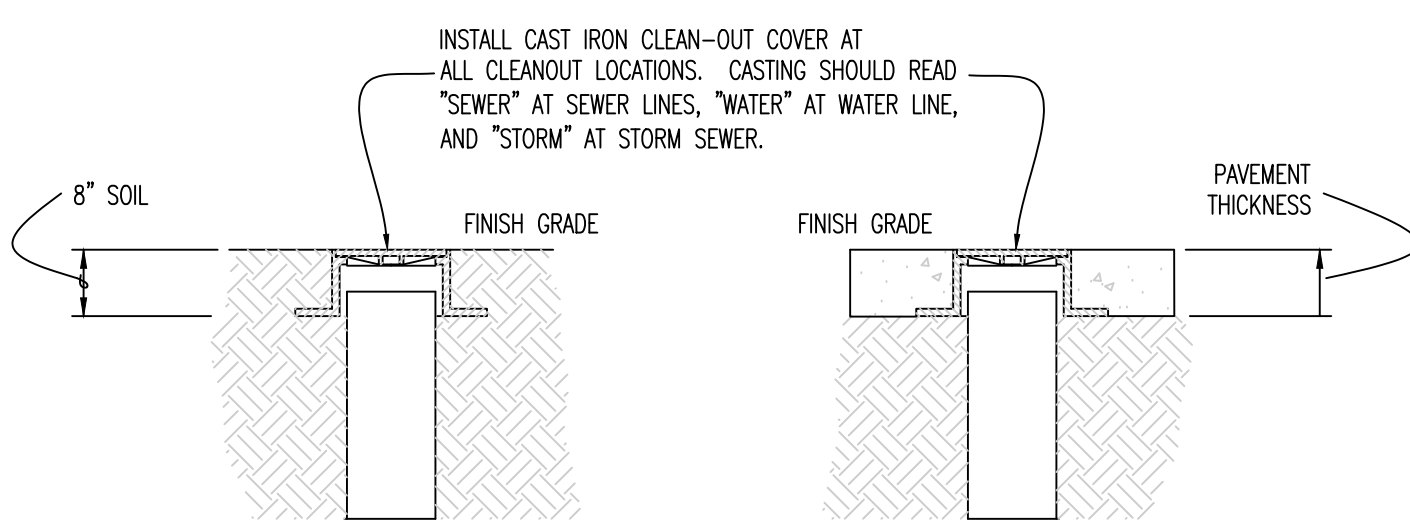
NOTE:
ALL EXISTING UTILITIES SHALL TO BE PROTECTED DURING WORK, EXCAVATION AND/OR SHORING. UTILITY SHALL REMAIN ACTIVE DURING WORK AND SHALL BE PROTECTED FROM SHIFTING, SAGGING OR OTHER DAMAGE. REFER TO SPECIFICATIONS. DESIGN OF SHORING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.



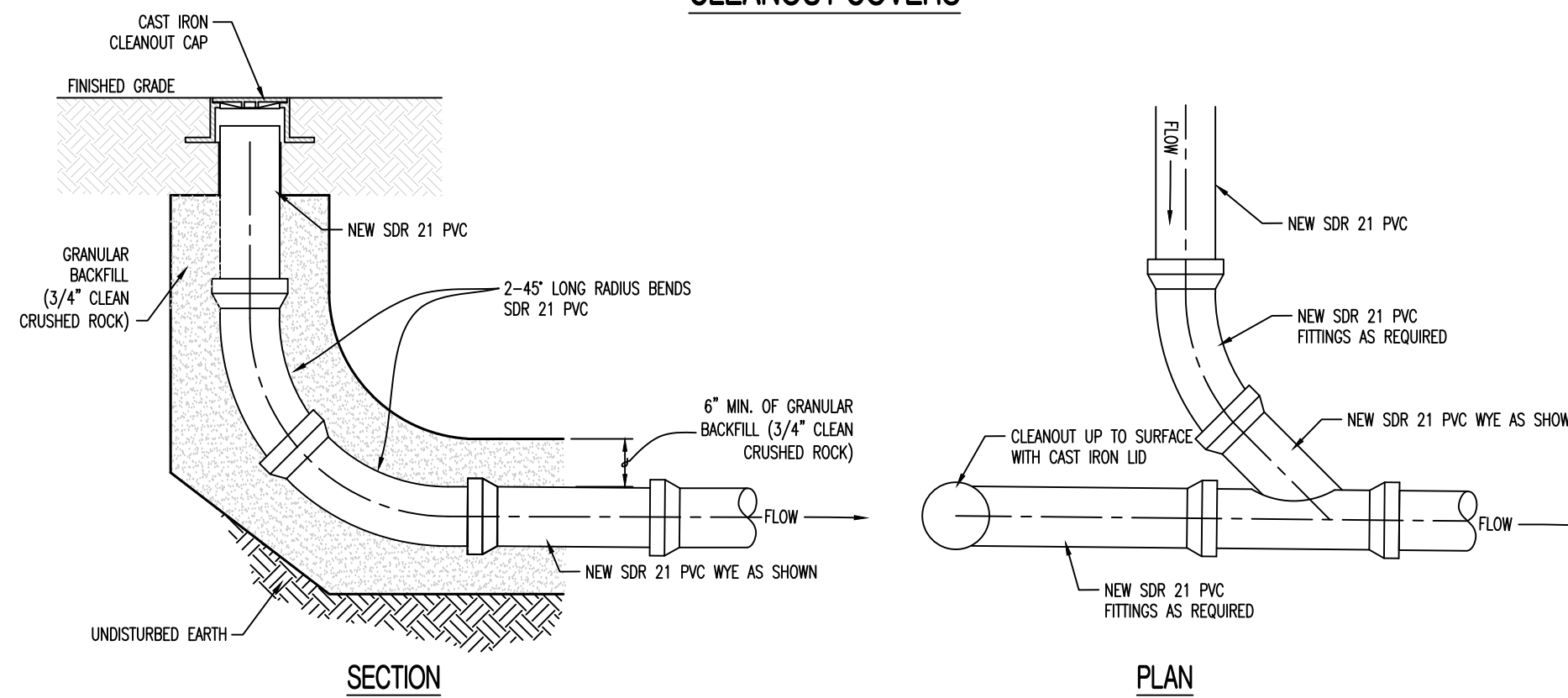
ROOF DRAIN DETAIL



TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN



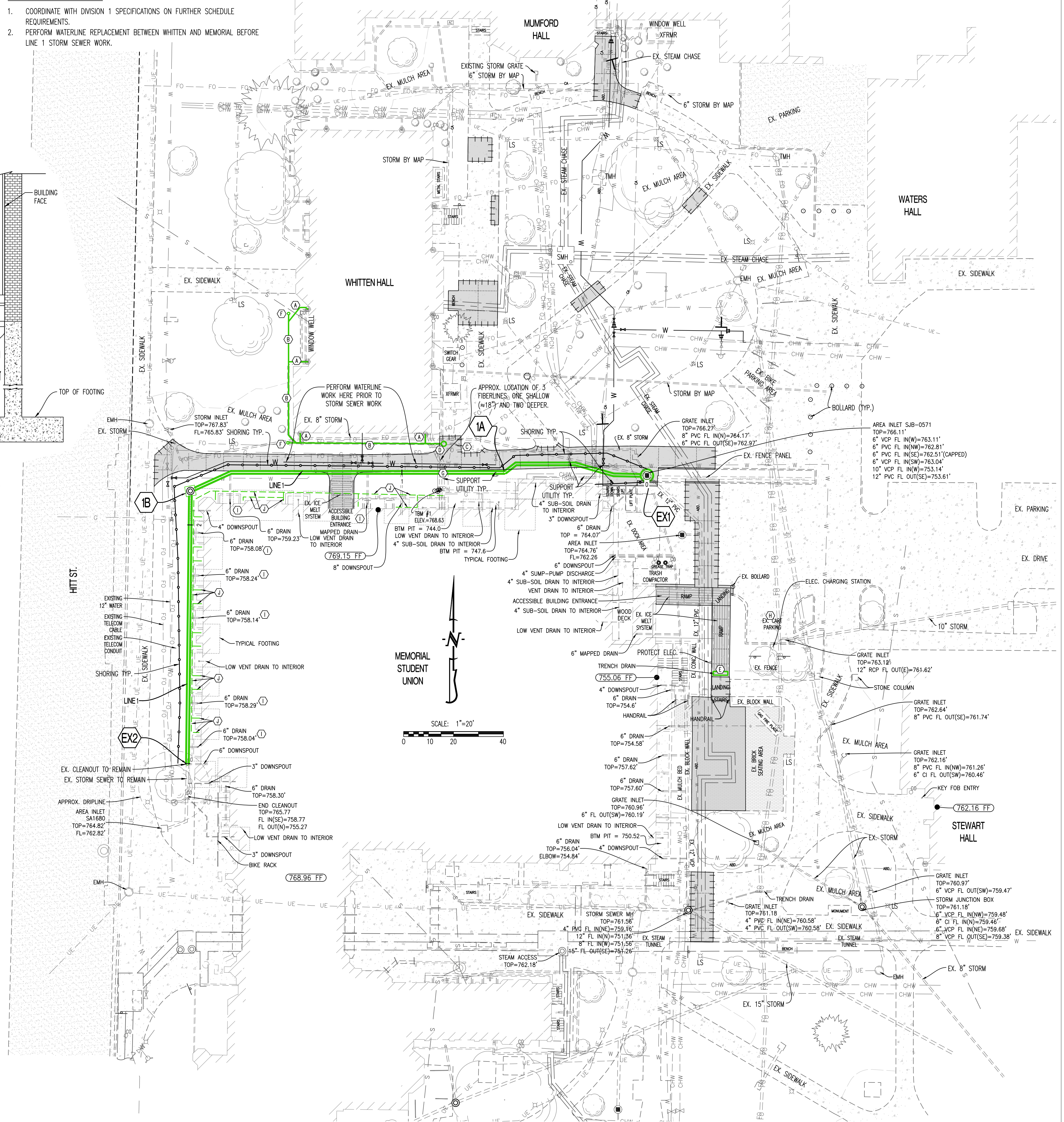
CLEANOUT COVERS



STORM SEWER CLEANOUT

SCHEDULE NOTES:

1. COORDINATE WITH DIVISION 1 SPECIFICATIONS ON FURTHER SCHEDULE REQUIREMENTS.
2. PERFORM WATERLINE REPLACEMENT BETWEEN WHITTEN AND MEMORIAL BEFORE LINE 1 STORM SEWER WORK.



02/06/25	ADDITION 01	CHECKED BY: WTE
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	DRAWN BY: ATG	

PRV CONSULTANTS, INC.
1617 SECOND AVE. STE. 110
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PHONE 562.263.9161
MISSOURI CERTIFICATE OF AUTHORITY ENGINEERING - 202017805



UNIVERSITY OF MISSOURI - COLUMBIA
GENERAL SITE - REPLACE UTILITIES
NEAR MEMORIAL UNION
COLUMBIA, BOONE COUNTY, MISSOURI 65203

UNIVERSITY OF MISSOURI PROJECT NUMBER
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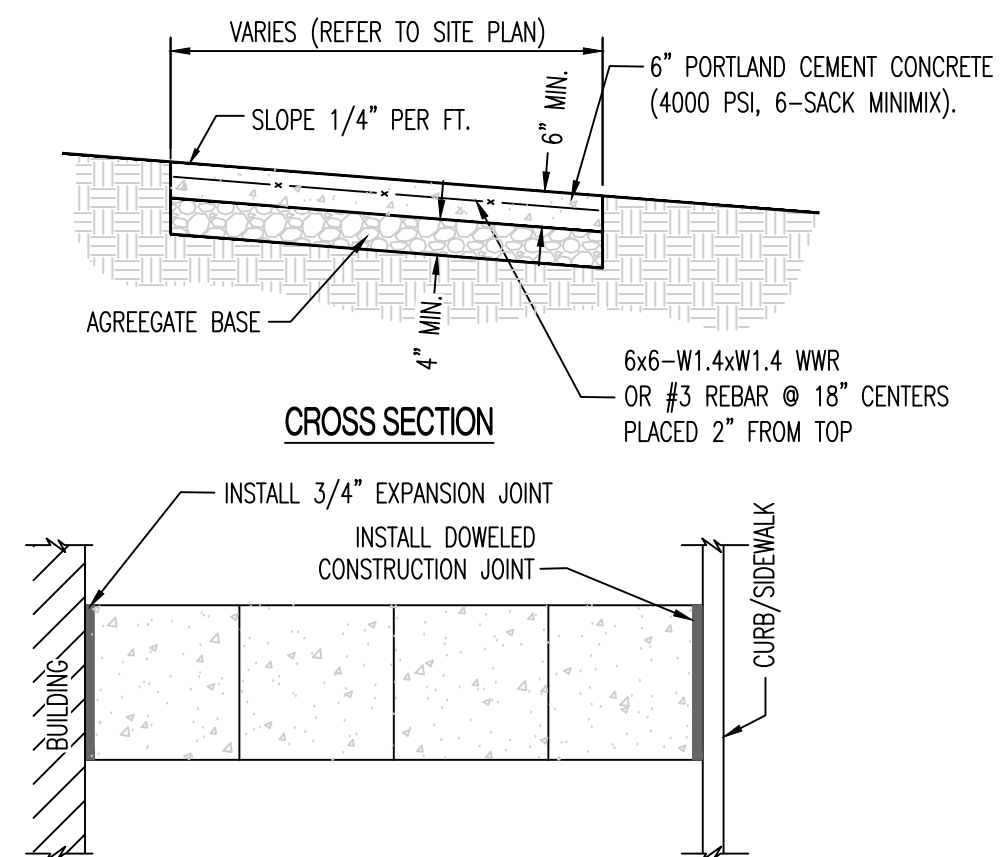
STORM SEWER PLAN

LEGEND OF LABELS

- (A) PATCH CONCRETE DRIVE PAVEMENT AS SHOWN. MATCH EXISTING SLOPE AND GRADE. REFER TO DETAIL ON THIS SHEET. CONCRETE FOR THIS AREA SHALL BE HIGH EARLY STRENGTH, REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- (B) REPLACE CONCRETE CURB SECTION INTEGRAL TO PAVEMENT REPLACEMENT AS SHOWN. MATCH EXISTING SLOPE AND GRADE. REFER TO DETAIL ON THIS SHEET.
- (C) PATCH TYPICAL CONCRETE SIDEWALK AS SHOWN. MATCH EXISTING SLOPE AND GRADE. REFER TO CROSS SECTION ON THIS SHEET.
- (D) INSTALL 3/4" EXPANSION JOINT BETWEEN PAVEMENT AND BUILDING/STAIRS.
- (E) REPLACE FENCE AS NEEDED.
- (F) INSTALL DOWELED CONSTRUCTION JOINT TO EXISTING PAVEMENT WITH SEALANT AS SHOWN. REFER TO DETAIL ON THIS SHEET.
- (G) INSTALL TYPE C SAW JOINT WITH SEALANT AS SHOWN (TYPICAL). REFER TO JOINT DETAILS ON THIS SHEET.
- (H) REINSTALL BENCH.
- (I) INSTALL NEW BLACK RAILING TO MATCH EXISTING.
- (J) RECONSTRUCT CONCRETE ADA RAMP WITH RAILING (PER ALLOWANCE) AS SHOWN. NEW RAMP WILL NOT HAVE SIDE WALLS. REFER TO GRADING PLAN FOR GRADES. REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION. REFER TO ARCHITECTURAL PLANS FOR RAILING.
- (K) REMOVED.
- (L) REINSTALL SALVAGED PAVERS TO MATCH EXISTING CONDITIONS.
- (M) EXISTING GAS FIREPLACE TO REMAIN.
- (N) SMALL BLOCK RETAINING WALL TO BE REINSTALLED.
- (O) ICE MELT SYSTEM TO BE REPLACED IN NEW SIDEWALK. REFER TO MEP PLANS.

NOTES:

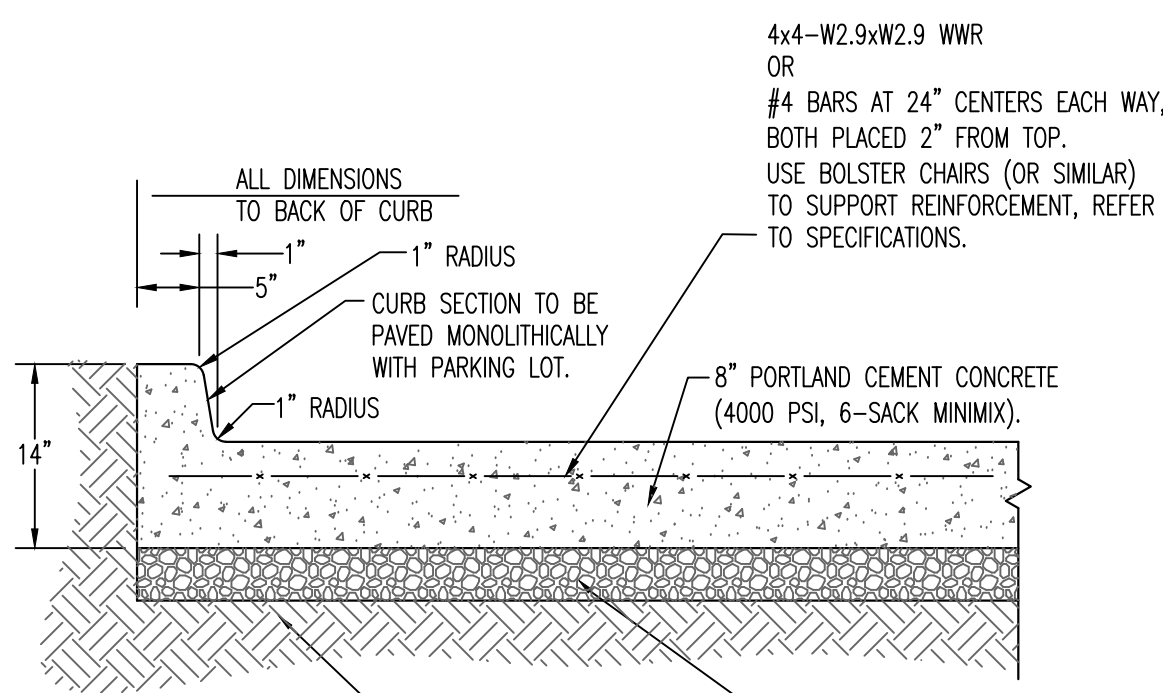
- HARD SURFACE DIMENSIONS SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY. REMOVAL AND REPLACEMENT LIMITS SHALL BE TO NEAREST SAW JOINT IN PAVEMENT.



TYPICAL LOCATION OF EXPANSION JOINT AT BUILDING/CURB

- NOTE:**
- SIDEWALK SHALL BE 6" THICK CLASS A CONCRETE ON 4" AGGREGATE BASE.
 - INSTALL 3/4" EXPANSION JOINT AT BUILDING/STRUCTURES.
 - INSTALL DOWELED CONSTRUCTION JOINT AT EXISTING PAVEMENTS.
 - INSTALL 1/2" EXPANSION JOINT EVERY 100'.
 - INSTALL TRANSVERSE SAW JOINTS AT SPACING = SIDEWALK WIDTH.

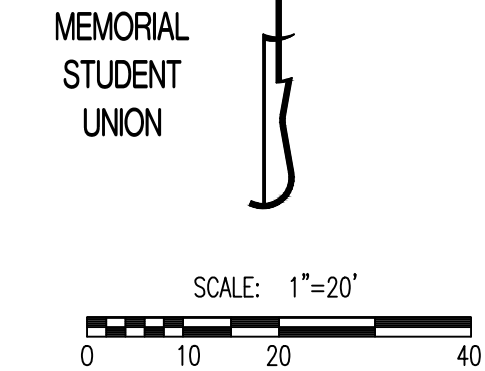
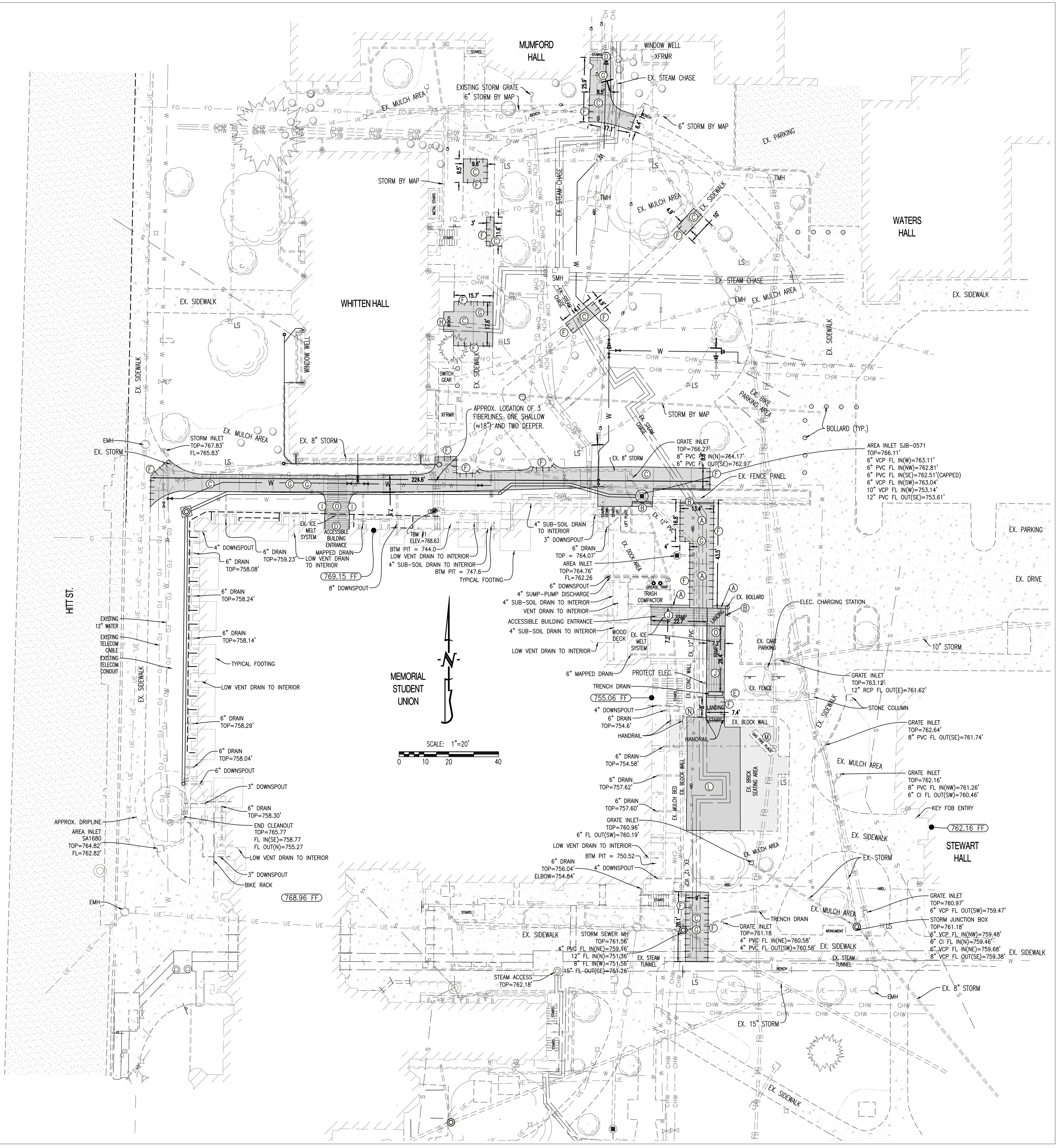
TYPICAL PRIVATE SIDEWALK



JOINT DETAILS (P.C. CONCRETE PAVEMENT)

CONCRETE PAVEMENT W/ INTEGRAL CURB (HEAVY DUTY)

- NOTES:**
- CONCRETE SHALL BE CLASS AA
 - REINFORCING STEEL SHALL BE GRADE 60



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

ANDREW T. GREENE
NO. 016295
MO LICENSE - PE-202000043

CROCKETT
ENGINEERING CONSULTANTS

02/06/25	ADDENDUM 01	ISSUE FOR BID	CHECKED BY: WTE
01/16/25	ATG	DRAWN BY: ATG	

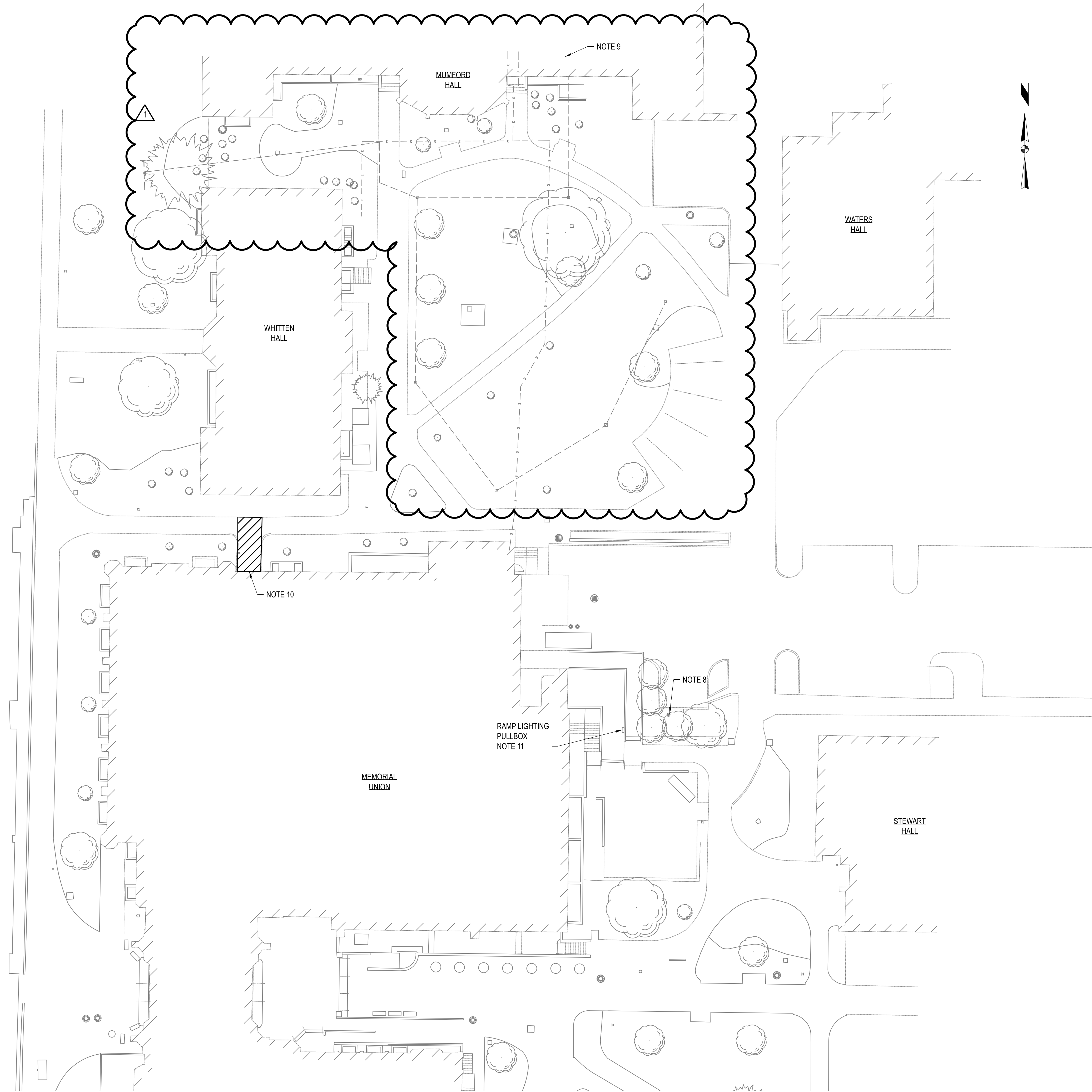
PRV CONSULTANTS, INC.
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MISSOURI CERTIFICATE OF AUTHORITY ENGINEERING - 202201805




UNIVERSITY OF MISSOURI - COLUMBIA
GENERAL SITE - REPLACE UTILITIES
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COLUMBIA, BOONE COUNTY, MISSOURI 65203

UNIVERSITY OF MISSOURI
PROJECT NUMBER
CP230201
CONSULTANT
PROJECT NUMBER
220449
SHEET


CE 7




- NOTES:**
1. ALL EXISTING CONDITIONS SHOWN HAVE BEEN DETERMINED FROM CASUAL FIELD OBSERVATIONS AND AS-BUILT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT FIELD CONDITIONS (QUANTITIES, LOCATIONS, ETC) PRIOR TO BEGINNING WORK.
 2. ALL DEVICES AND EQUIPMENT SHOWN LIGHT AND CONTINUOUS ON THIS SHEET ARE EXISTING EQUIPMENT TO REMAIN. ALL DEVICES AND EQUIPMENT SHOWN BOLD AND DASHED ON THIS SHEET ARE TO BE DISCONNECTED, REMOVED AND DISPOSED OF BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE INDICATED. THE OWNER SHALL BE GIVEN SALVAGE RIGHTS TO ALL EQUIPMENT INDICATED FOR REMOVAL WITHOUT RE-INSTALLATION. CONTRACTOR SHALL DISPOSE OF ALL UNSALVAGED EQUIPMENT IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.
 3. WHEN A DEVICE IS DESIGNATED TO BE REMOVED, THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL ASSOCIATED WIRE AND CONDUIT BACK TO THE NEAREST DEVICE TO REMAIN OR TO THE PANEL, UNLESS OTHERWISE INDICATED. CONTINUITY OF CONDUCTORS FEEDING DEVICES TO REMAIN SHALL BE MAINTAINED DURING CONSTRUCTION.
 4. PORTIONS OF EXISTING CONDUIT UNDER SIDEWALKS MAY REMAIN FOR RE-USE.
 5. NOT USED.
 6. NOT USED.
 7. NOT USED.
 8. PROTECT GOLF CART RECEPTACLE AND ASSOCIATED INFRASTRUCTURE DURING CONSTRUCTION.
 9. AT INTERIOR OF MUMFORD HALL IN RESEARCH 29 AND 29A, PROVIDE RELOCATION OF (2) DRYERS. FOR EACH DRYER ACCOUNT FOR (1) 20A, 120V FAN CKT AND (1) 30A, 208V HEATER CKT. PROVIDE FOR DISCONNECTION, RELOCATION, AND RE-INSTALLATION OF EACH DRYER. SEE SHEET M120 FOR MORE INFORMATION ON DRYER LOCATIONS.
 10. DISCONNECT POWER SUPPLY TO ICE MELT SYSTEM IN NORTH ADA ENTRANCE RAMP TO ALLOW FOR RAMP DEMOLITION. RECORD DOCUMENTS SHOW THE TRACE CABLE IS RAYCHEM VIAGARD EM2-XR WITH VIA-DU-20 MULTI SENSOR CONTROL. A 208V 1 PHASE POWER CIRCUIT EXTENDS FROM PANEL P3 IN THE SERVICE ENTRANCE. NEW ICE MELT CABLE WILL BE INSTALLED DURING RAMP RECONSTRUCTION. EXISTING POWER SUPPLY TO ICE MELT SYSTEM TO BE REUSED.
 11. CONTRACTOR TO DISCONNECT POWER SUPPLY TO EXISTING CONCRETE-EMBEDDED RAMP LIGHTS TO PREPARE THEM TO BE DEMOLISHED. EXISTING POWER SUPPLY WILL BE REUSED FOR NEW POLE MOUNTED FIXTURE. SEE NEW WORK DRAWING E101 FOR MORE DETAILS.

LEGEND:
 ITEMS TO BE DEMOLISHED

ELECTRICAL DEMOLITION SITE PLAN

SCALE: 1"=20'-0"


THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.




JEFFERY GAMBRELL
 LICENSE NO. PE-2000179300
 NUMBER
 PE-2000179300
 PROFESSIONAL ENGINEER

02/06/2025
 ENGINEER / ARCHITECT OF RECORD:
 JEFFERY GAMBRELL, PE
 LICENSE NO. PE-2000179300
 PRVN CONSULTANTS, INC.
 1617 SECOND AVE., STE 110
 ROCK ISLAND, IL 61201
 PHONE: 563-263-5160

1	02/06/25	ISSUED FOR ADDENDUM 1	
0	01/10/25	ISSUED FOR BID	

DRAWN BY: M.A.O.
 CHECKED BY: J.T.G.

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 MISSOURI CERTIFICATE OF AUTHORITY ENGINEERING - 2023017805



UNIVERSITY OF MISSOURI - COLUMBIA
 GENERAL SITE - REPLACE UTILITIES
 NEAR MEMORIAL UNION
 COLUMBIA, BOONE COUNTY, MISSOURI 65203
 ELECTRICAL DEMOLITION SITE PLAN

UNIVERSITY OF MISSOURI
 PROJECT NUMBER

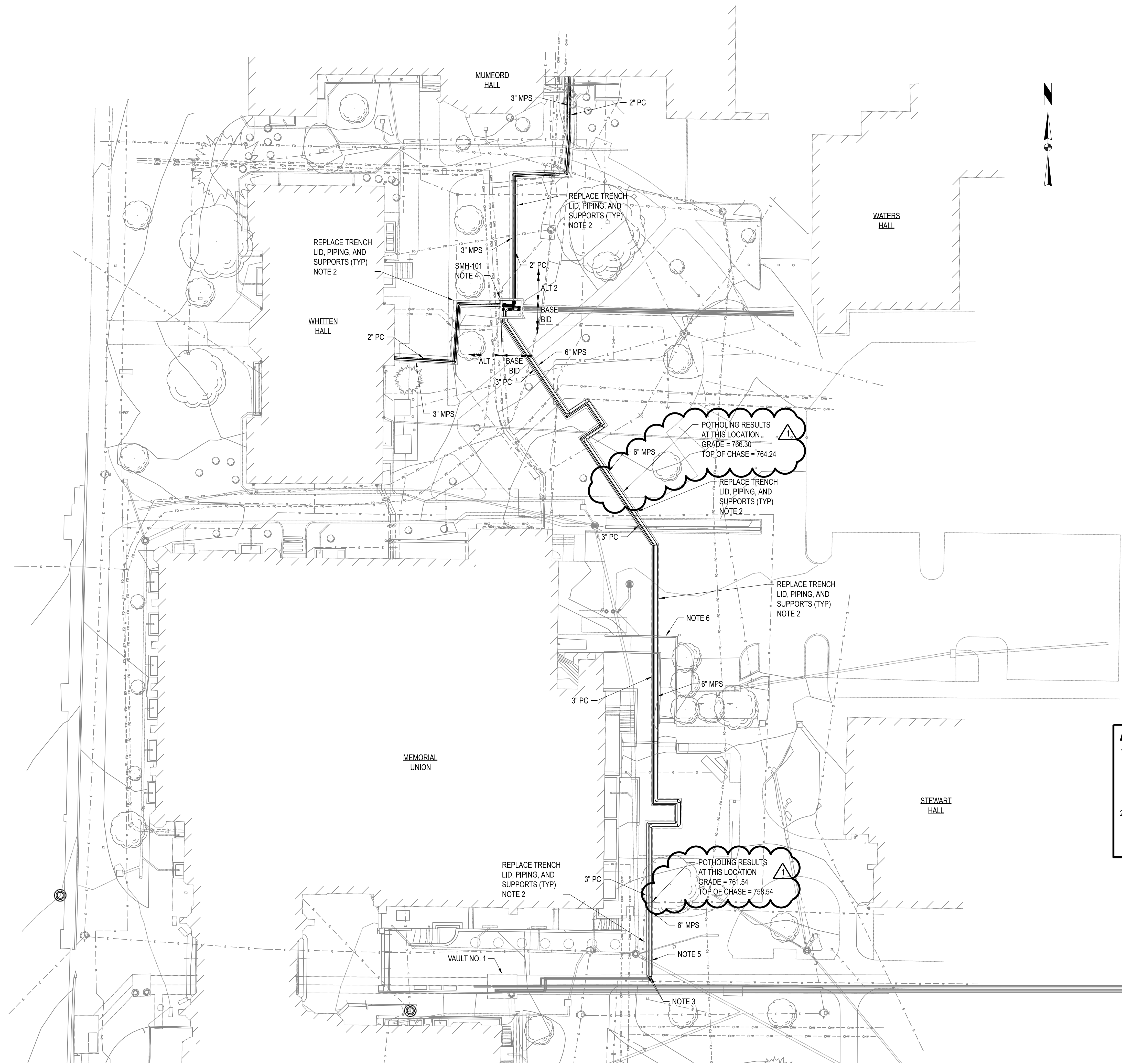
CP230201

CONSULTANT
 PROJECT NUMBER

24084

SHEET

D101

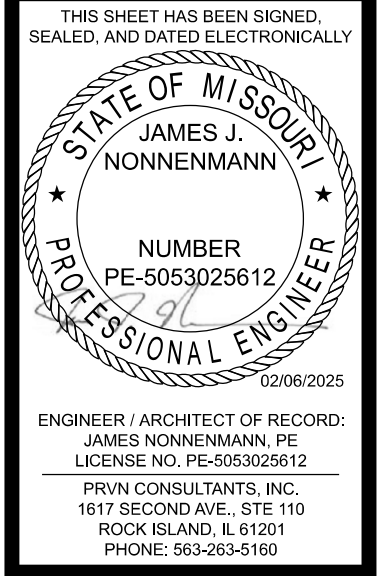


- NOTES:**
1. CONTRACTOR SHALL NOTIFY ENGINEER WHEN SECTIONS OF STEAM CHASE ARE CLEARED OF PIPING AND READY FOR INSPECTION. ENGINEER WILL DETERMINE EXTENT OF CHASE REPAIRS REQUIRED. CONTRACTOR SHALL MAKE REPAIRS PER DETAILS ON S110. CONTRACTOR SHALL INCLUDE UNIT PRICING FOR CRACK AND SPALL REPAIRS SHOWN ON S110 AS INSTRUCTED IN THE PROJECT MANUAL.
 2. INSTALL NEW PIPING, ANCHORS, AND SUPPORTS IN CHASE. REFER TO THERMAL EXPANSION PLANS FOR SUPPORT TYPE AND SPACING, AND MECHANICAL DETAILS FOR SUPPORT CONSTRUCTION. SEE STRUCTURAL DRAWINGS FOR CHASE REPAIR AND NEW LID CONSTRUCTION DETAILS.
 3. CONNECT NEW 6" MPS AND 3" PC TO EXISTING ELBOWS IN TUNNEL.
 4. EXISTING SMH-101 TO REMAIN AND BE REFURBISHED. SEE M110 FOR MECHANICAL WORK. SEE STRUCTURAL DRAWINGS FOR STRUCTURAL MODIFICATIONS AND WATERPROOFING REQUIREMENTS.
 5. REFURBISH SECTION OF STEAM CHASE ADJACENT TO UTILITY TUNNEL AND REPLACE MPS AND PC SERVICES DURING PHASE 1 TO ALLOW FOR SIDEWALK REOPENING.
 6. REFER TO SHEET M130 FOR ICE MELT SYSTEM TO BE INSTALLED IN NEW RAMP.

ASBESTOS NOTES - CAUTION!!!

1. STEAM CHASE WATERPROOFING MAY CONTAIN ASBESTOS. ONCE EXCAVATED TO BE EXPOSED, THE WATERPROOFING SHALL BE TESTED FOR ACM. ASBESTOS ABATEMENT MAY BE REQUIRED TO REMOVE STEAM CHASE LID SHALL BE PROVIDED BY CONTRACTOR.
2. MPS/PC PIPING INSULATION WITHIN CHASE MAY CONTAIN ASBESTOS. ONCE EXPOSED, THE WATERPROOFING AND PIPE INSULATION SHALL BE TESTED FOR ACM. ASBESTOS ABATEMENT SHALL BE PROVIDED BY CONTRACTOR.

OVERALL MECHANICAL SITE PLAN
SCALE: 1"=20'-0"



1	02/06/25	ISSUED FOR ADDENDUM 1	CHECKED BY: J.J.N.
0	01/10/25	ISSUED FOR BID	DRAWN BY: M.A.C.

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UNIVERSITY OF MISSOURI - COLUMBIA
GENERAL SITE - REPLACE UTILITIES
NEAR MEMORIAL UNION
COLUMBIA, BOONE COUNTY, MISSOURI 65203
OVERALL MECHANICAL SITE PLAN

UNIVERSITY OF MISSOURI
PROJECT NUMBER
CP230201
CONSULTANT
PROJECT NUMBER
24084
SHEET
M100

GENERAL NOTES

ELEVATION DATUM
SEE ARCHITECTURAL DRAWINGS OR SITE PLAN FOR FINISH FLOOR ELEVATIONS

DESIGN SPECIFICATIONS
2021 INTERNATIONAL BUILDING CODE

EARTHWORK
EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:
FOUNDATIONS - 3,000 PSI
CAST-IN-PLACE WALLS - 4,500 PSI
FLOOR SLAB - 4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS - 4,500 PSI
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
- CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
- ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
- CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
- CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINMENT AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
- SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
- READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
- CONCRETE WORK EXECUTION
 - CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
EXPOSED TO EARTH OR WEATHER.....2 INCHES
NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....1 1/2 INCHES
 - PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4" OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
 - STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

SPECIAL INSPECTIONS

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

- CONCRETE GROUT DESIGN MIX (PERIODIC)
- PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
- IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

DESIGN DATA

2021 INTERNATIONAL BUILDING CODE / ASCE 7-16

NEW STEAM MANHOLE LOAD DATA

LIVE LOAD	250
CONCRETE LID	100
MECHANICAL ALLOWANCE	15
TOTAL TO LID	365 lbs/sqft

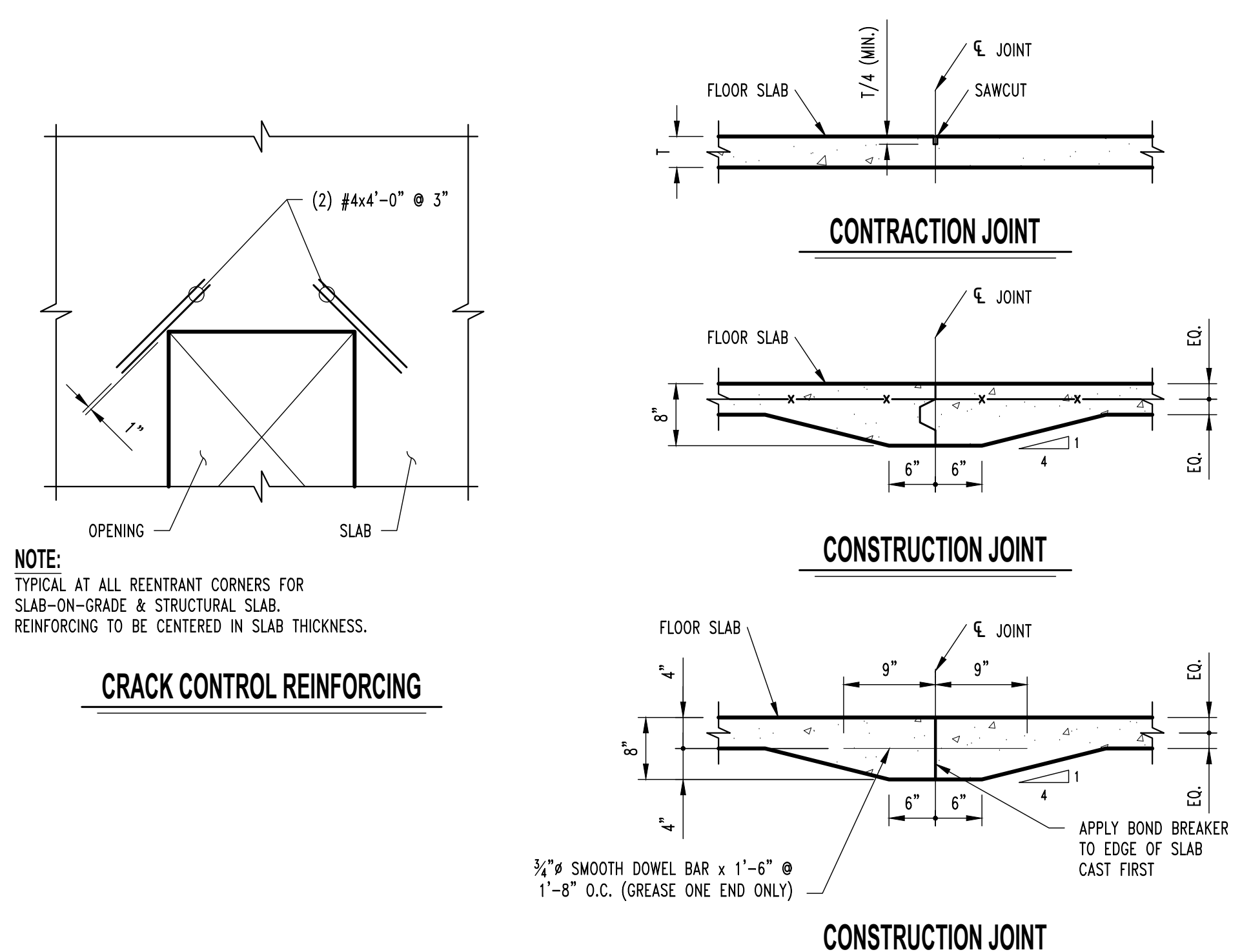
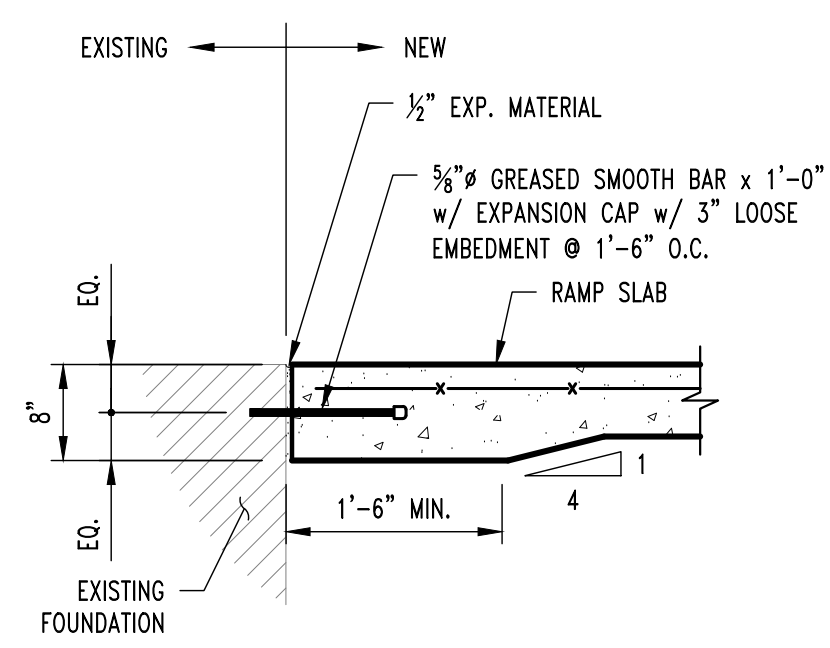
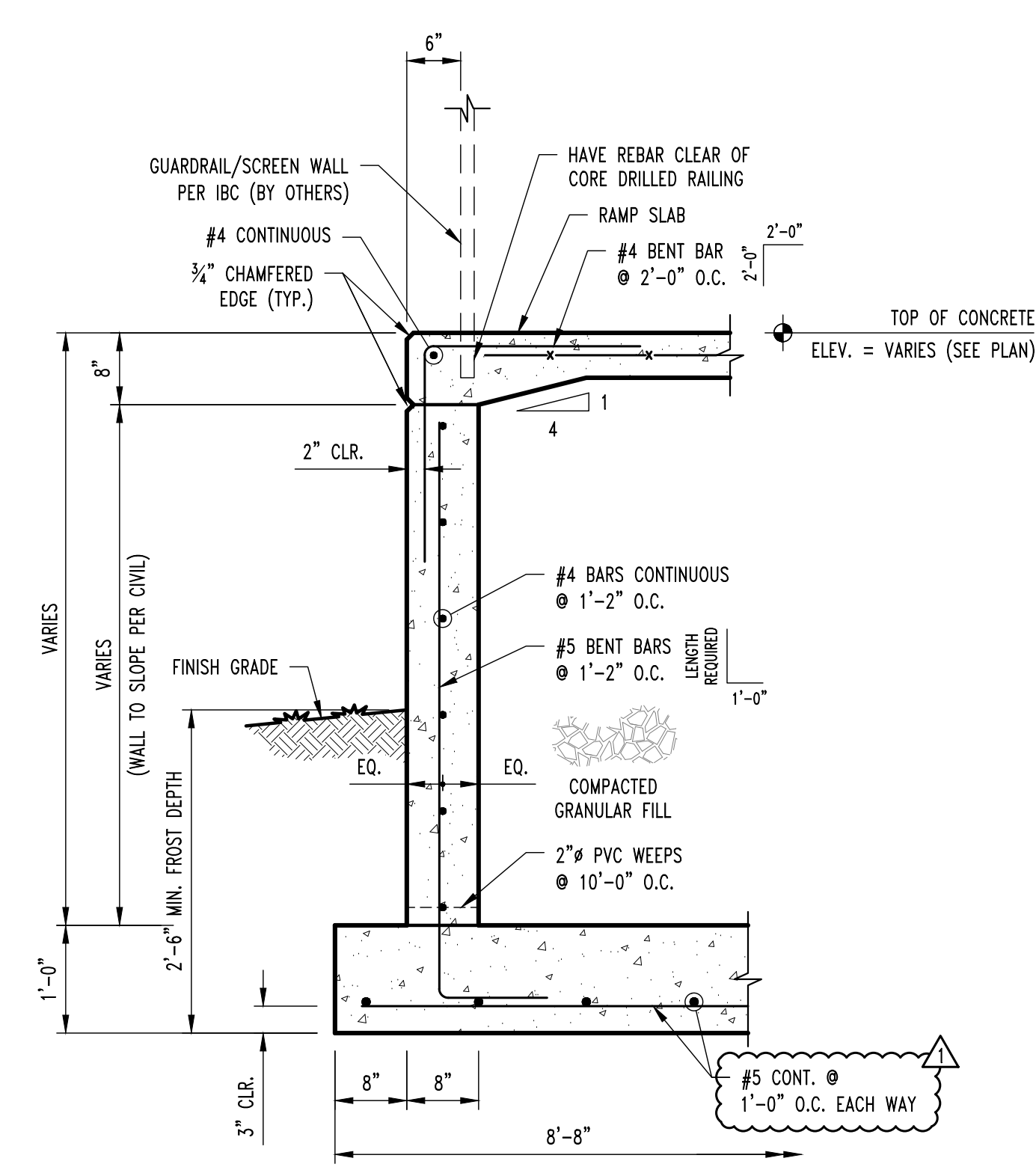
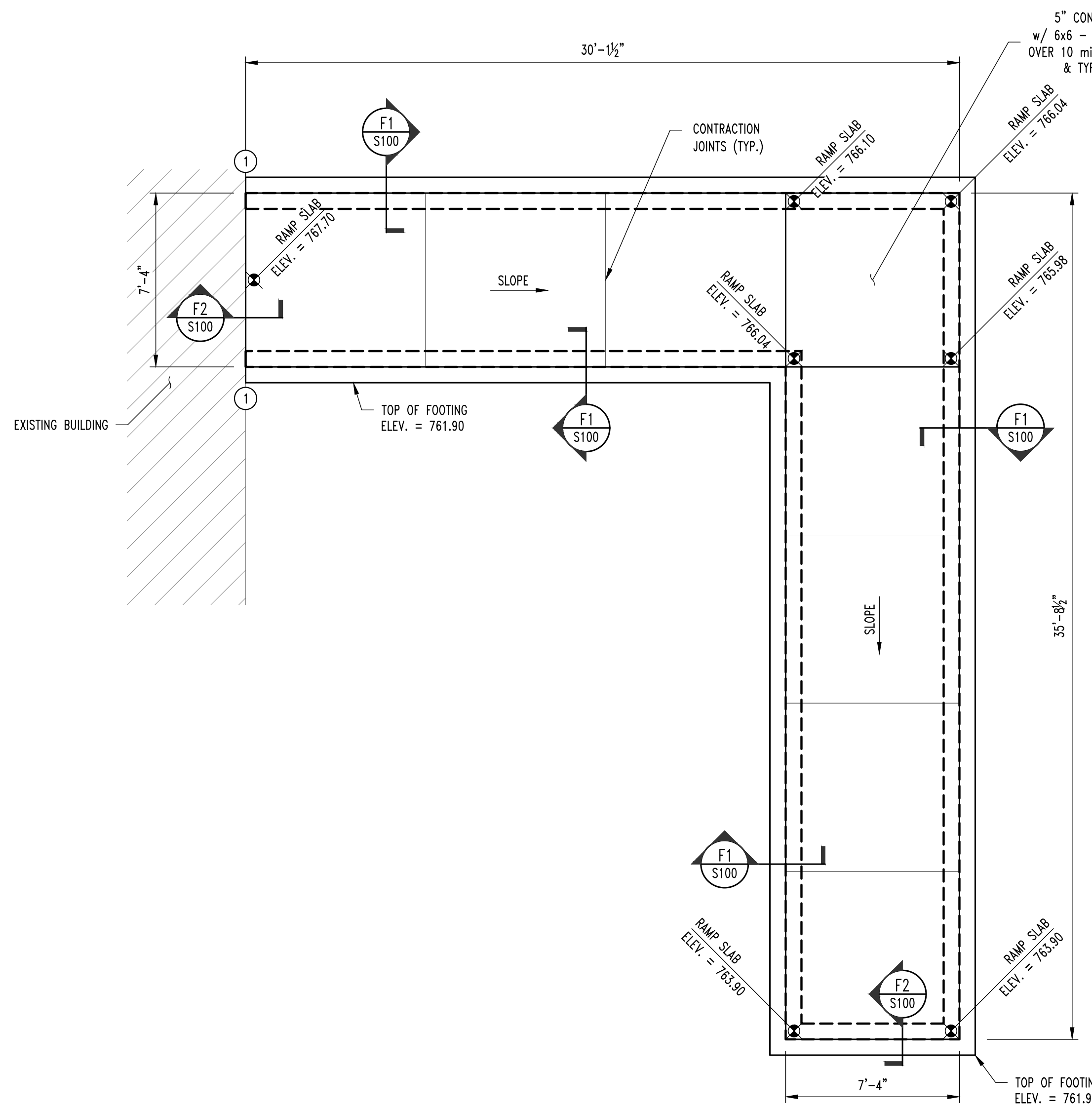
WALL BELOW GRADE SOIL PARAMETERS

BEARING CAPACITY	1500 PSF (ASSUMED)
ACTIVE AT-REST EARTH PRESSURES (GRANULAR)	60 PCF

EARTHQUAKE DESIGN DATA

RISK CATEGORY	IV
I _e	1.5
S _s	0.161
S ₁	0.094
SITE CLASS	C
S _{DS}	0.14
S _{D1}	0.094
SEISMIC DESIGN CATEGORY	C
BASIC SEISMIC-FORCE-RESISTING SYSTEM -	
ORDINARY REINFORCED CONCRETE SHEAR WALLS	
R	4.0
Ω _e	2.5
C _s	4.0

DESIGN BASE SHEAR
EQUIVALENT LATERAL FORCE PROCEDURE
V = 0.054W



NOTES

- DOWEL NEW TO EXISTING w/ 4" EPOXY EMBEDMENT @ FOOTING & WALL.
- REINTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL S210.

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

CROCKETT
ENGINEERING CONSULTANTS

000025 01/16/25
ADDENDUM 1
ISSUED FOR BID

CHECKED BY: GLL
DRAWN BY: RCA

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UNIVERSITY OF MISSOURI - COLUMBIA
GENERAL SITE - REPLACE UTILITIES
NEAR MEMORIAL UNION
COLUMBIA, BOONE COUNTY, MISSOURI 65203
RAMP FOUNDATION PLAN & DETAILS

UNIVERSITY OF MISSOURI
PROJECT NUMBER
CP230201
CONSULTANT
PROJECT NUMBER
220449
SHEET
S100

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

02/05/2025
GREGORY L. LINNEHAN - PE
MO LICENSE - 2005001013

CHECKED BY: GLL
DRAWN BY: RGA

000025
010625
ADDENDUM 1
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UNIVERSITY OF MISSOURI - COLUMBIA
GENERAL SITE - REPLACE UTILITIES
NEAR MEMORIAL UNION
COLUMBIA, BOONE COUNTY, MISSOURI 65203

TYPICAL REPAIR DETAILS & NOTES

UNIVERSITY OF MISSOURI
PROJECT NUMBER
CP230201

CONSULTANT
PROJECT NUMBER
220449

SHEET
S110

CONCRETE REPAIR NOTES

- PRIOR TO PERFORMING ANY CONCRETE REPAIRS, CONTRACTOR SHALL EXAMINE THE ENTIRE CONCRETE SURFACE BY SOUNDING TO DETECT ANY DEFICIENCIES NOT SHOWN ON THE CONTRACT DOCUMENTS. IF DEFICIENCIES ARE DETECTED, MARK OUTLINE ON CONCRETE SURFACE AND NOTIFY OWNER'S REPRESENTATIVE. PROVIDE OWNER'S REPRESENTATIVE WITH APPROXIMATE SIZE AND LOCATION OF EACH DEFICIENCY NOTED.
- REMOVE ALL LOOSE AND DETONATED CONCRETE. CHIP OUT AND PATCH AREA 1/2" MIN. BEYOND SPALLED SURFACE. AT BOUNDARIES OF DETERIORATED CONCRETE, SAWCUT BOUNDARY TO A MINIMUM DEPTH OF 3/4". DO NOT FEATHER EDGES.
- CARE SHOULD BE EXERCISED NOT TO DAMAGE EXISTING REINFORCING STEEL DURING CONCRETE REMOVAL. CONCRETE REMOVAL SHALL EXTEND TO WHERE BAR IS WELL BONDED TO SURROUNDING SOUND CONCRETE. CARE SHALL BE EXERCISED NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR IS REQUIRED AS SPECIFIED IN ITEM 4 BELOW.
- IF HALF OF THE THICKNESS OF THE REINFORCEMENT BAR OR MORE IS EXPOSED PROVIDE A MINIMUM OF 1/2" CLEARANCE BETWEEN EXPOSED REINFORCEMENT AND SURROUNDING CONCRETE FOR HAND APPLIED REPAIR MATERIALS AND A MINIMUM OF 1" CLEARANCE FOR SPRAY APPLIED REPAIR MATERIALS.
- MECHANICALLY CLEAN STEEL BY SANDBLASTING OR WIRE BRUSH TO WHITE METAL CONDITION TO REMOVE CORROSION. AFTER CLEANING REINFORCING STEEL, MEASURE DIAMETER AT NARROWEST POINT. IF SECTION LOSS IS GREATER THAN 25% (SEE "REINFORCING BAR DIAMETER TABLE" ON THIS SHEET) ADD NEW REINFORCING BAR MATCHING SIZE OF EXISTING. MAINTAIN A MINIMUM OF 1/2" CONCRETE COVER AT ALL NEW AND EXISTING REINFORCEMENT, ANY REINFORCEMENT TO BE DRILLED AND GROUDED INTO EXISTING CONCRETE SHALL USE HILTI HIT HY 200 MAX EPOXY ADHESIVE (OR APPROVED EQUAL).
- SCARIFY CONCRETE SURFACE TO OBTAIN CONCRETE SURFACE PROFILE ROUGHENED.
- MINIMUM DEPTH OF PATCH TO BE 3/8".
- SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION.
- APPLY CONCRETE PRIMER TO SUBSTRATE PER MANUFACTURERS SPECIFICATIONS. APPLY TWO COATS OF ANTI-CORROSION COATING PER MANUFACTURERS SPECIFICATIONS TO ALL EXPOSED REINFORCEMENT ALLOWING TO PROPERLY DRY BETWEEN COATS. SIKAFERROGARD 901 OR APPROVED EQUAL.
- WHILE CONCRETE PRIMER IS STILL WET, APPLY PATCH MATERIAL PER MANUFACTURERS SPECIFICATIONS. FOR APPLICATIONS GREATER THAN 1" IN DEPTH, APPLY PATCH MATERIAL IN LIFTS. SCORE THE TOP SURFACE OF EACH LIFT AND ALLOW EACH LIFT TO REACH FINAL SET THEN REPEAT FROM STEP 8.
- PROVIDE MECHANICAL SPLICE CAPABLE OF DEVELOPING 125% F_y. MAINTAIN A MINIMUM OF 1/2" CONCRETE COVER AT ALL NEW AND EXISTING REINFORCEMENT.
- CLEAN CRACK SURFACES AND REMOVE ANY FOREIGN MATTER AND DEPOSITS.
- INSTALL POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL PER MANUFACTURERS SPECIFICATION AND TOOL SURFACE TO MATCH SURROUNDING SURFACE. SIKATOP-123 OR APPROVED EQUAL.
- LID REPAIRS REQUIRE SHORING TO BE INSTALLED PRIOR TO DAMAGED CONCRETE BEING REMOVED. SHORING SHALL PROVIDE ADEQUATE SUPPORT TO STRUCTURE UNTIL PATCH IS INSTALLED AND CURED.

REINFORCING BAR DIAMETER TABLE

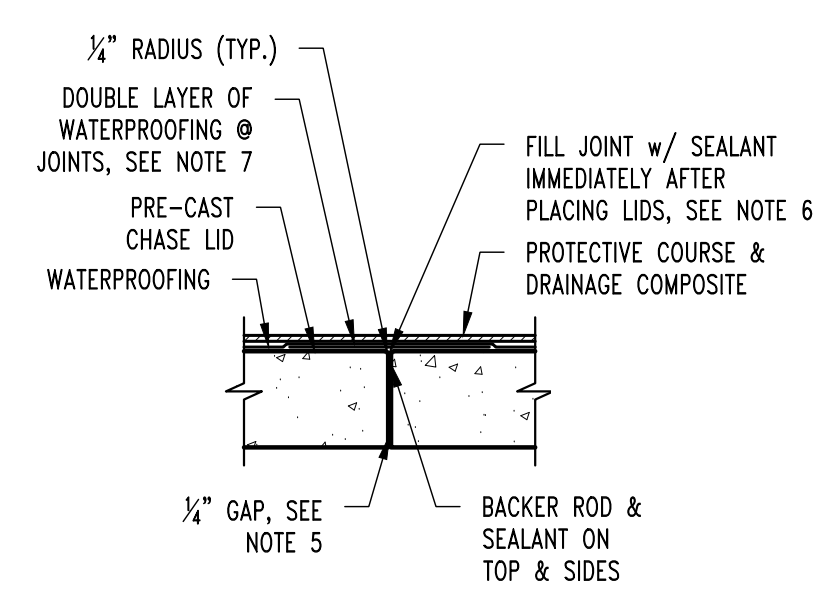
BAR SIZE	NOMINAL DIAMETER (IN.)	MINIMUM ALLOWABLE DIAMETER (IN.)
#3	0.375	0.325
#4	0.500	0.433
#5	0.625	0.541
#6	0.750	0.650
#7	0.875	0.758
#8	1.000	0.866
#9	1.128	0.977
#10	1.270	1.100

TYPICAL WATERPROOFING NOTES

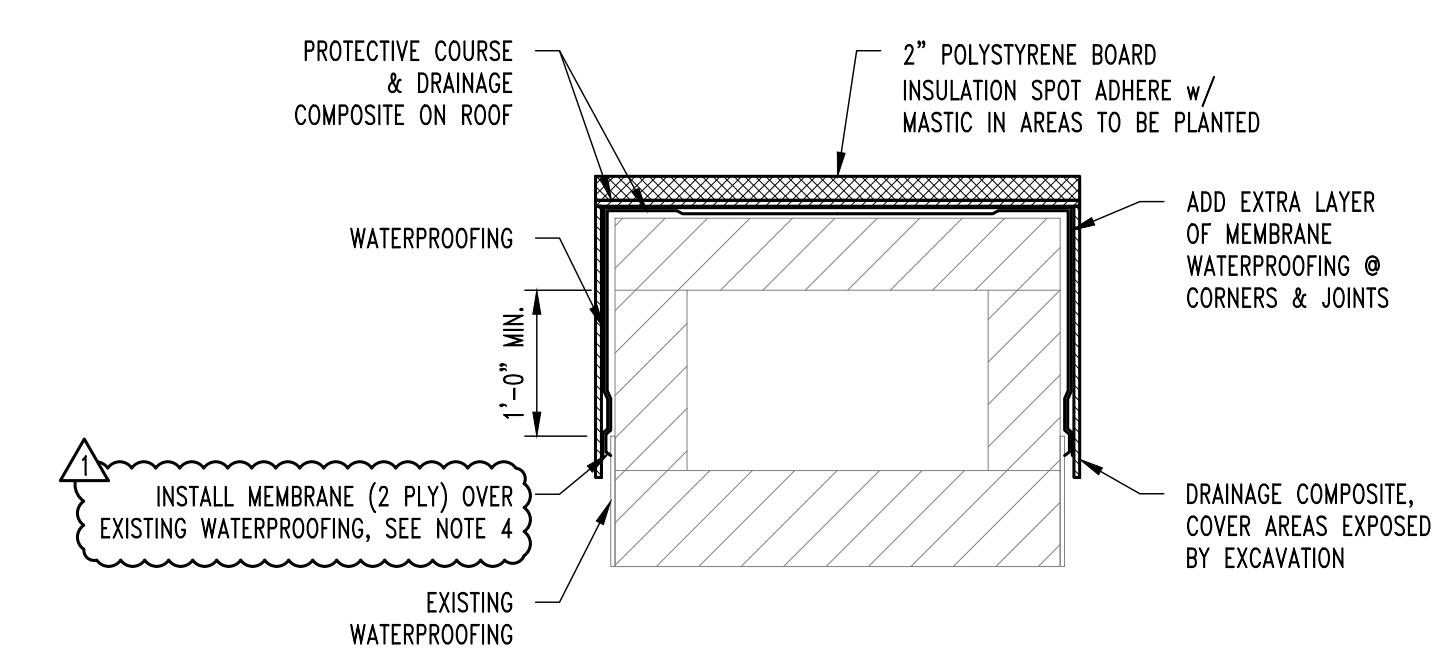
- OVERLAP HOT AND COLD APPLIED MEMBRANES PER MANUFACTURER'S REQUIREMENTS.
- CONTRACTOR SHALL PROTECT UNDER SLAB WATERPROOFING FROM HOT APPLIED WATERPROOFING.
- PREPARE ALL JOINTS IN ACCORDANCE W/ WATERPROOFING MANUFACTURER'S INSTRUCTIONS & DETAILS.
- CONTRACTOR SHALL PROPERLY PREPARE EXISTING CONCRETE SUBSTRATE & EXISTING WATERPROOFING TO PROPERLY INTERFACE W/ NEW WATERPROOFING SYSTEMS TO OBTAIN WATERPROOF JOINT.
- BUTT LIDS TIGHTLY TOGETHER @ PRE-CAST LIDS W/ 1/4" SHIM PLATE BETWEEN. REMOVE SHIM PLATES AFTER LIDS ARE IN FINAL POSITION & SEAL.
- ALL SEALANTS SHALL BE COMPATIBLE W/ WATERPROOFING SYSTEM.
- PREPARE ALL JOINTS IN ACCORDANCE W/ WATERPROOFING MANUFACTURER'S INSTRUCTIONS & DETAILS.

GENERAL NOTES

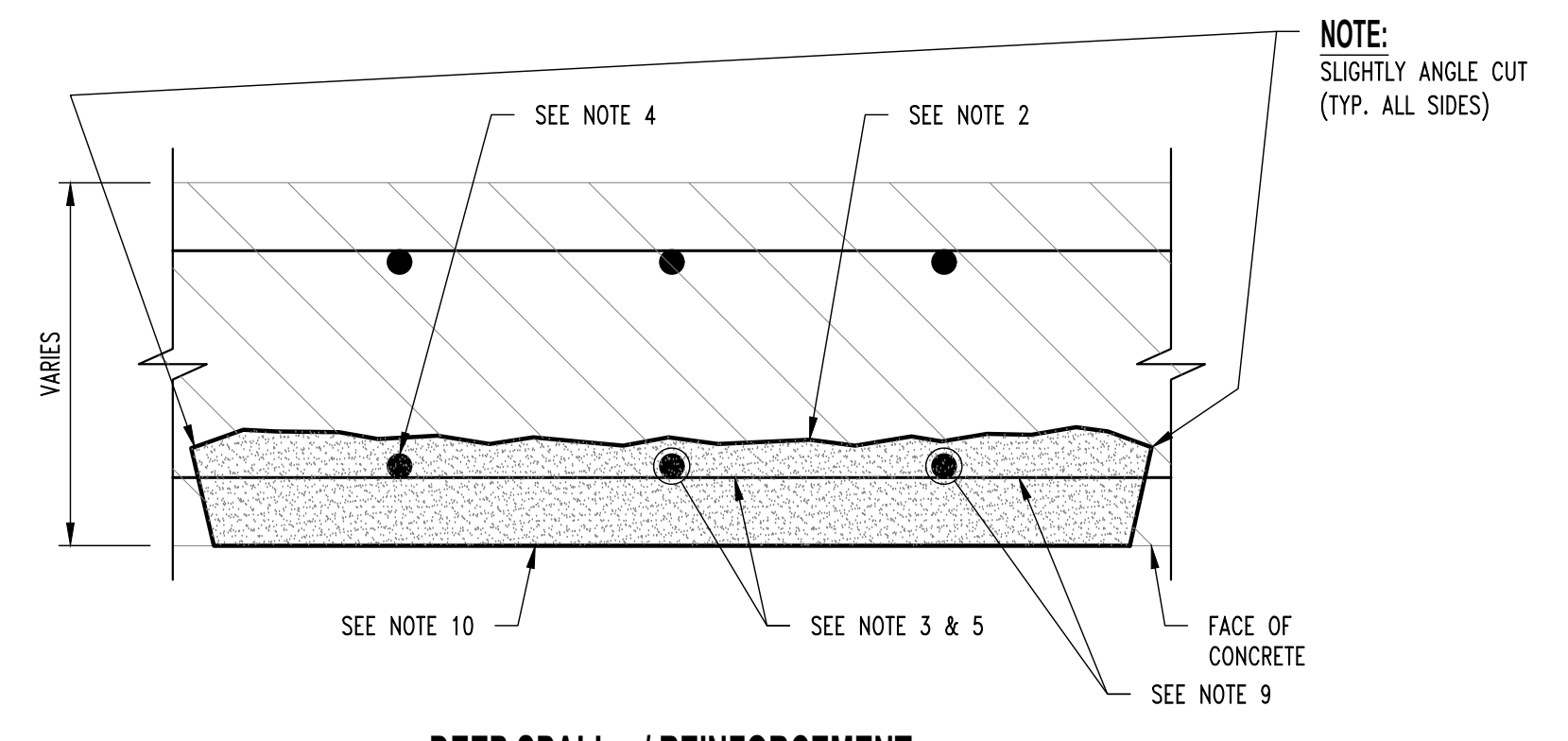
- ALL CONCRETE, REINFORCING, AND WATERPROOFING SHALL MEET THE SPECIFICATIONS IN DIVISION 33.
- WATERPROOFING SHOP DRAWINGS SHALL BE PROVIDED PER THE SPECIFICATIONS IN DIVISION 33.
- ALL UTILITIES IN AREA OF MANHOLE MAY BE ACTIVE DURING THE DURATION OF THE PROJECT INCLUDING THE STEAMLINES INSIDE THE MANHOLE. PIPING THAT WILL REMAIN NEEDS TO BE PROTECTED AS TO NOT DAMAGE DURING CONSTRUCTION. ANY DAMAGED MATERIALS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR IS TO LIMIT WATER ENTRY INTO STEAM SYSTEM DURING CONSTRUCTION.
- ALL BACKFILL SHALL BE MODOT TYPE 1 OR 5 AND SHALL HAVE COMPACTION TESTS COMPLETED IN 8 INCH LIFTS PER SPECIFICATION.
- ALL WATERSTOPS SHALL BE SECURELY FASTENED INTO PLACE AND FULLY INSPECTED BY THE OWNER. CONCRETE CANNOT BE CAST AGAINST WATERSTOPS UNTIL APPROVED BY THE OWNER. OWNER SHALL RECEIVE 24 HOUR NOTICE OF INSPECTIONS BEING REQUIRED.
- ALL CONCRETE WATERPROOFING SHALL BE INSPECTED BY THE OWNER PRIOR TO PROCEEDING TO NEXT STEP OF INSTALLATION. OWNER SHALL RECEIVE 24 HOUR NOTICE OF INSPECTIONS BEING REQUIRED. THESE INSPECTIONS FOR APPROVAL INCLUDE:
 - SUBSTRATE CONDITIONS READY FOR WATERPROOFING
 - CRACK AND HOLE SURFACE PREPARATIONS COMPLETED
 - FLASHING INSTALLATION COMPLETE
 - MEMBRANE INSTALLATION COMPLETE
 - PROTECTION AND DRAINAGE INSTALLATION COMPLETE



BELOW GRADE STEAM CHASE LID JOINT



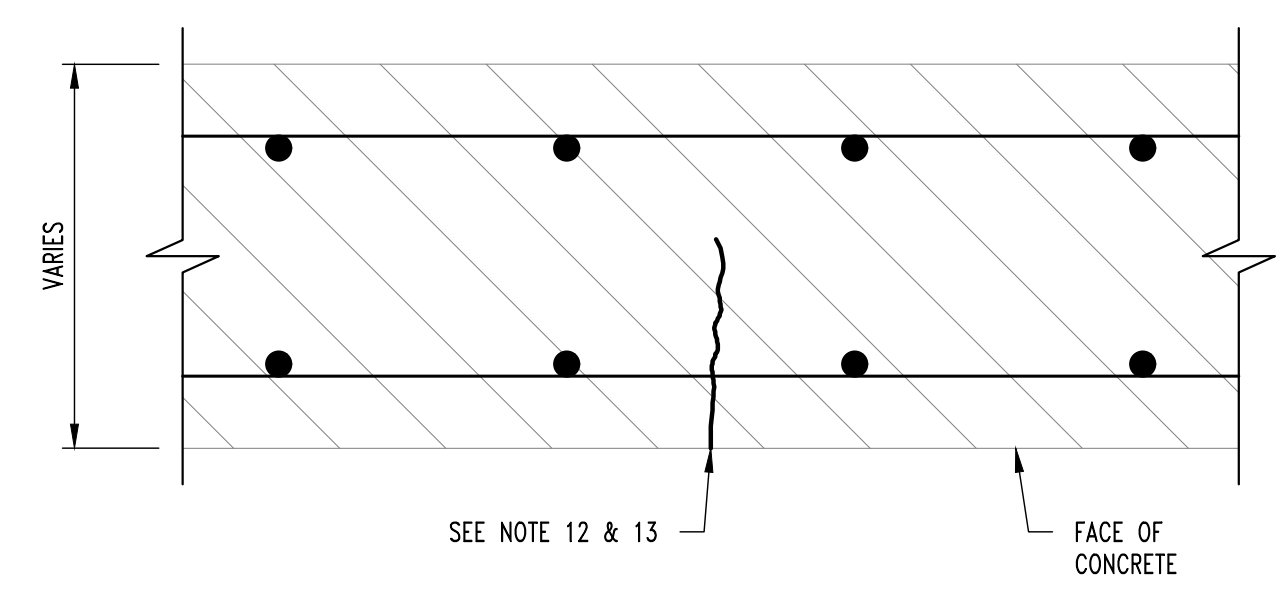
TYP. EXISTING STEAM CHASE WATERPROOFING DETAIL



DEEP SPALL w/ REINFORCEMENT SECTION LOSS LESS THAN OR EQUAL TO 25%

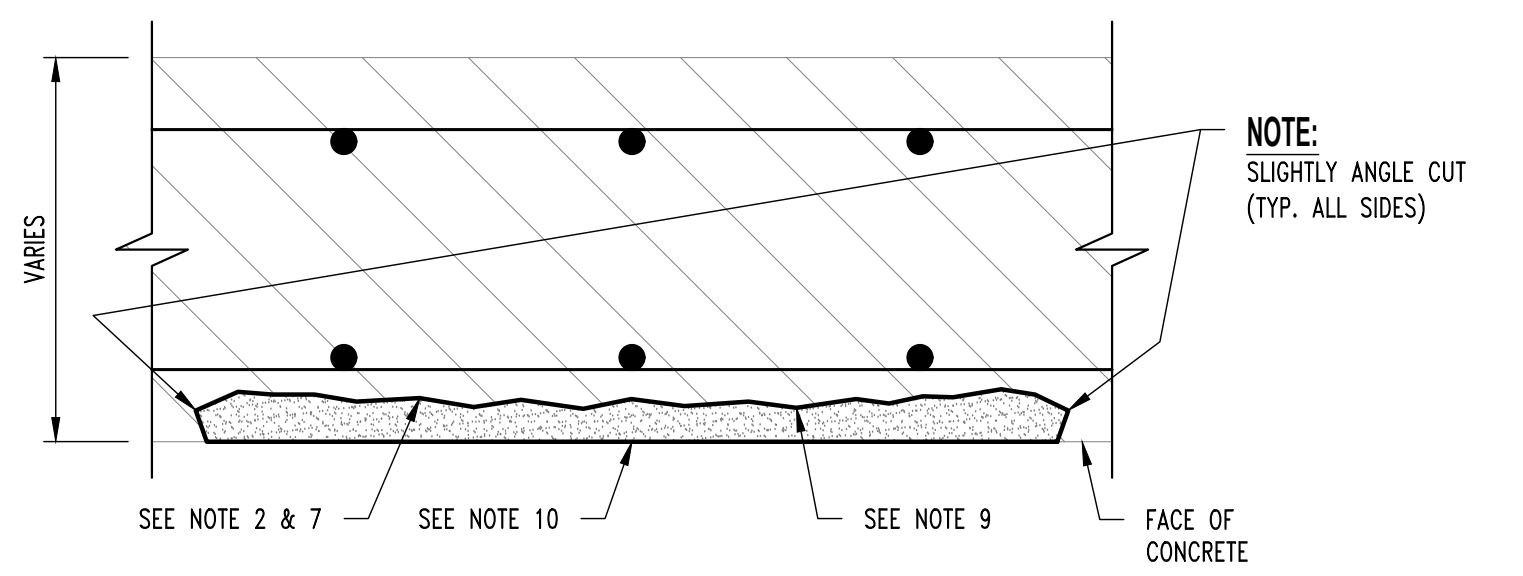
REPAIR #2

NOTE: DETAIL APPLIES TO SURFACE SPALLS WITH REINFORCEMENT EXPOSED.



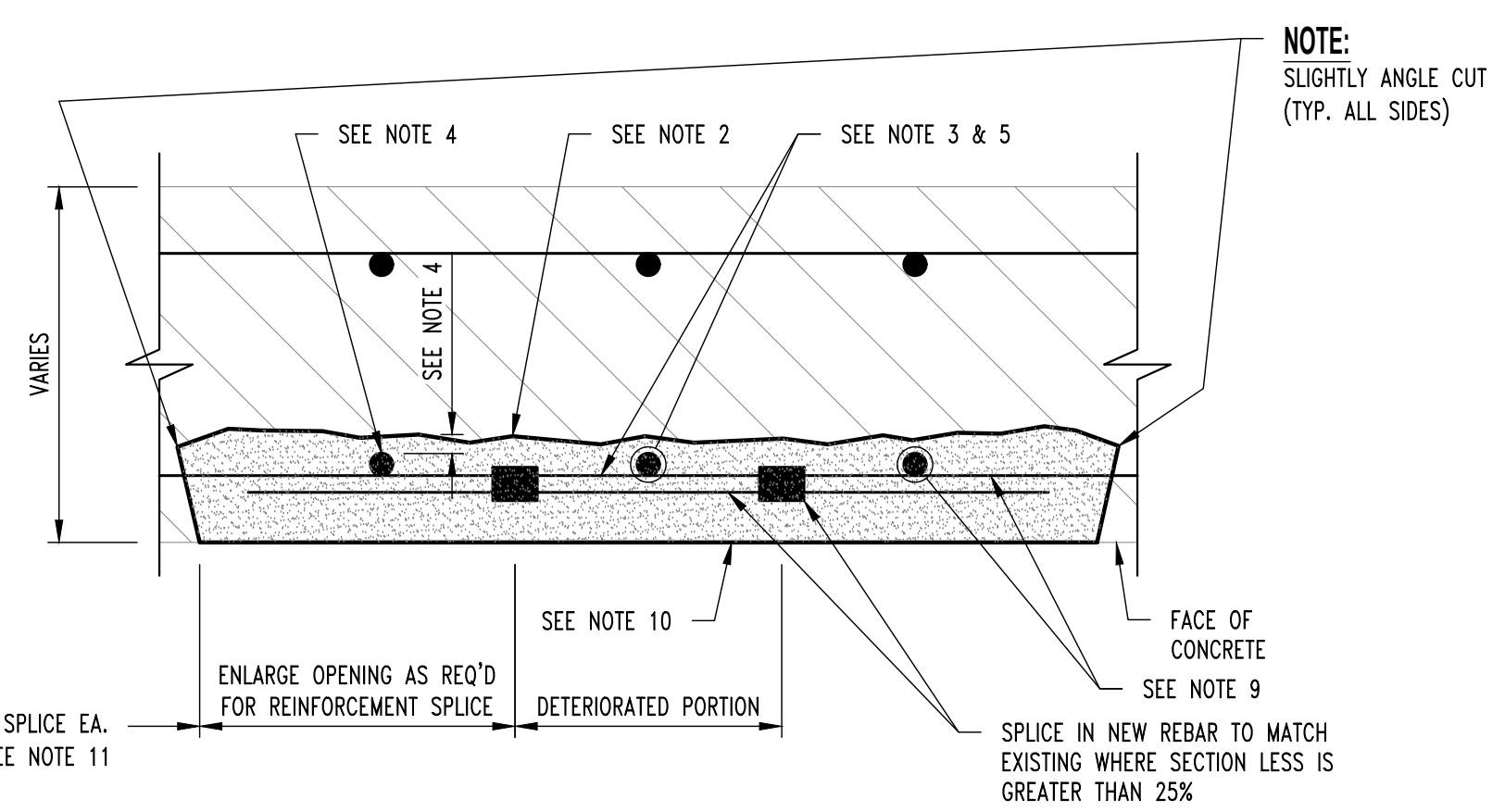
CRACK REPAIR REPAIR #4

NOTE: DETAIL APPLIES TO CRACKS LARGER THAN 0.03".



SURFACE SPALL REPAIR REPAIR #1

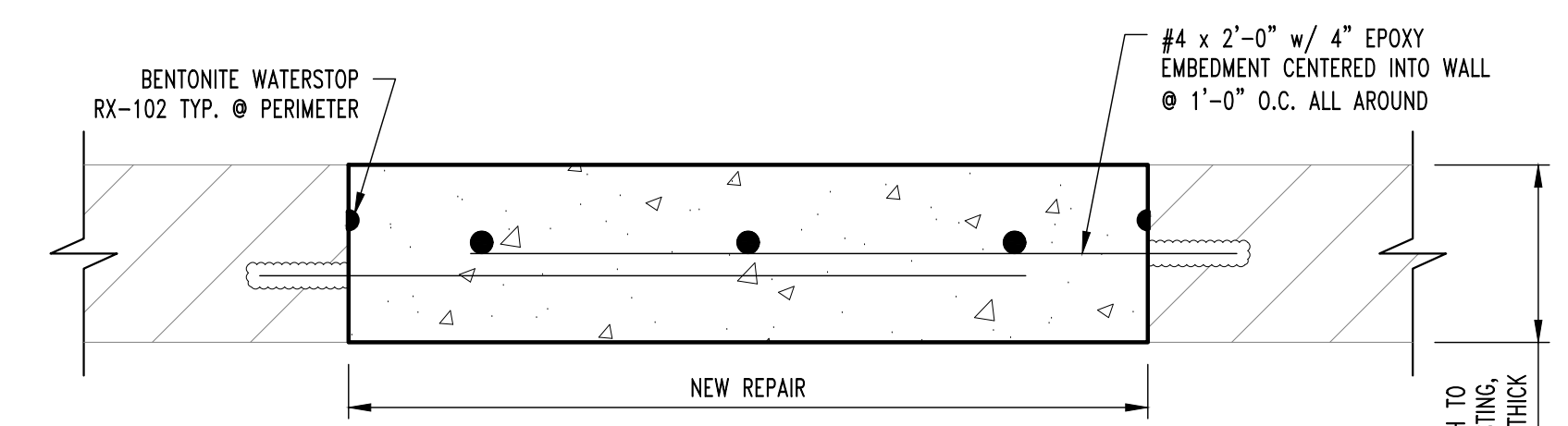
NOTE: DETAIL APPLIES TO SURFACE SPALLS WITH NO REINFORCEMENT EXPOSED.



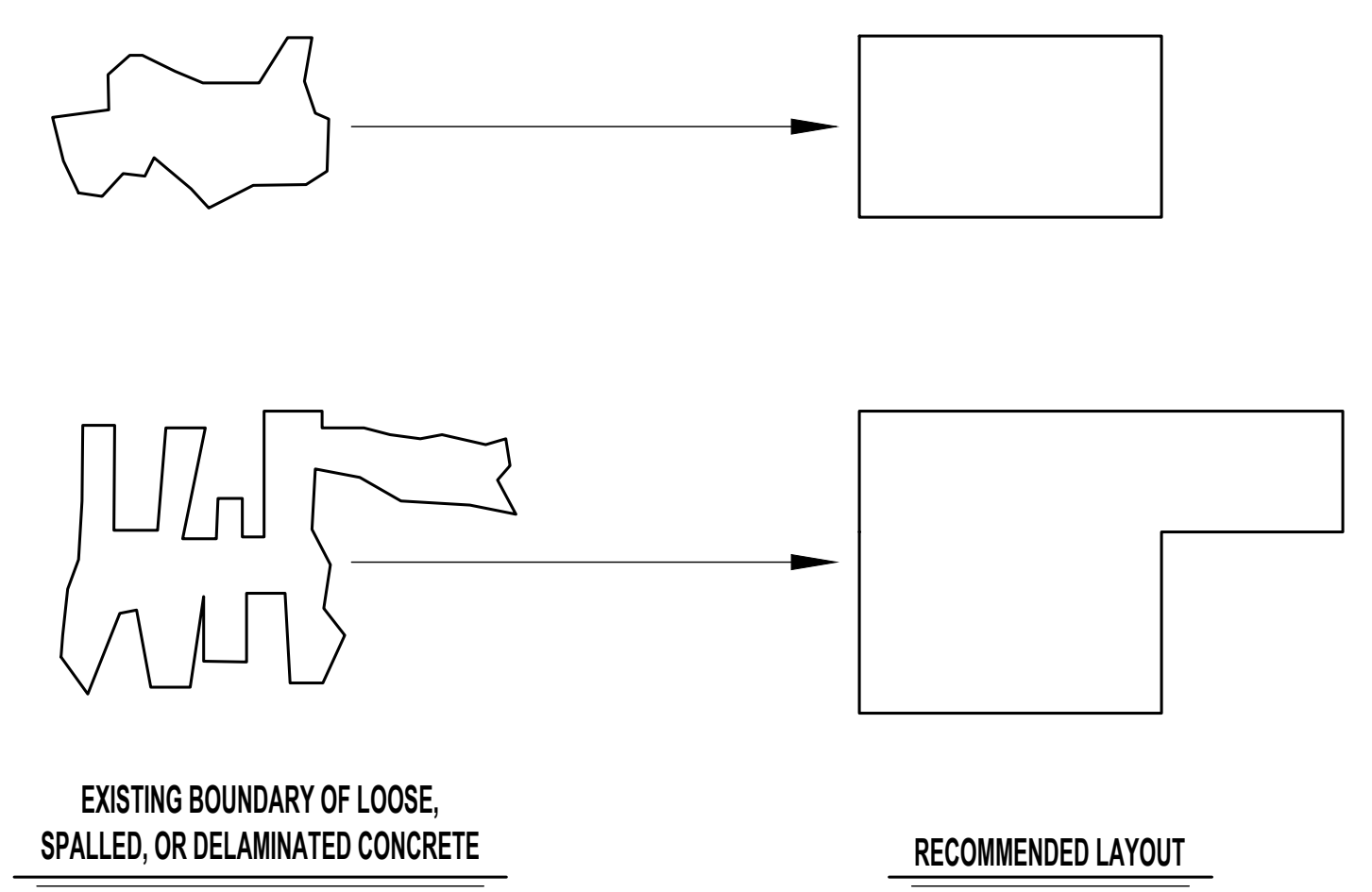
DEEP SPALL w/ REINFORCEMENT SECTION LOSS GREATER THAN OR EQUAL TO 25%

REPAIR #3

NOTE: DETAIL APPLIES TO SURFACE SPALLS WITH REINFORCEMENT EXPOSED.

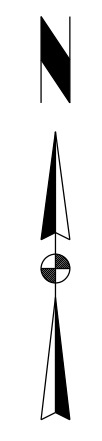
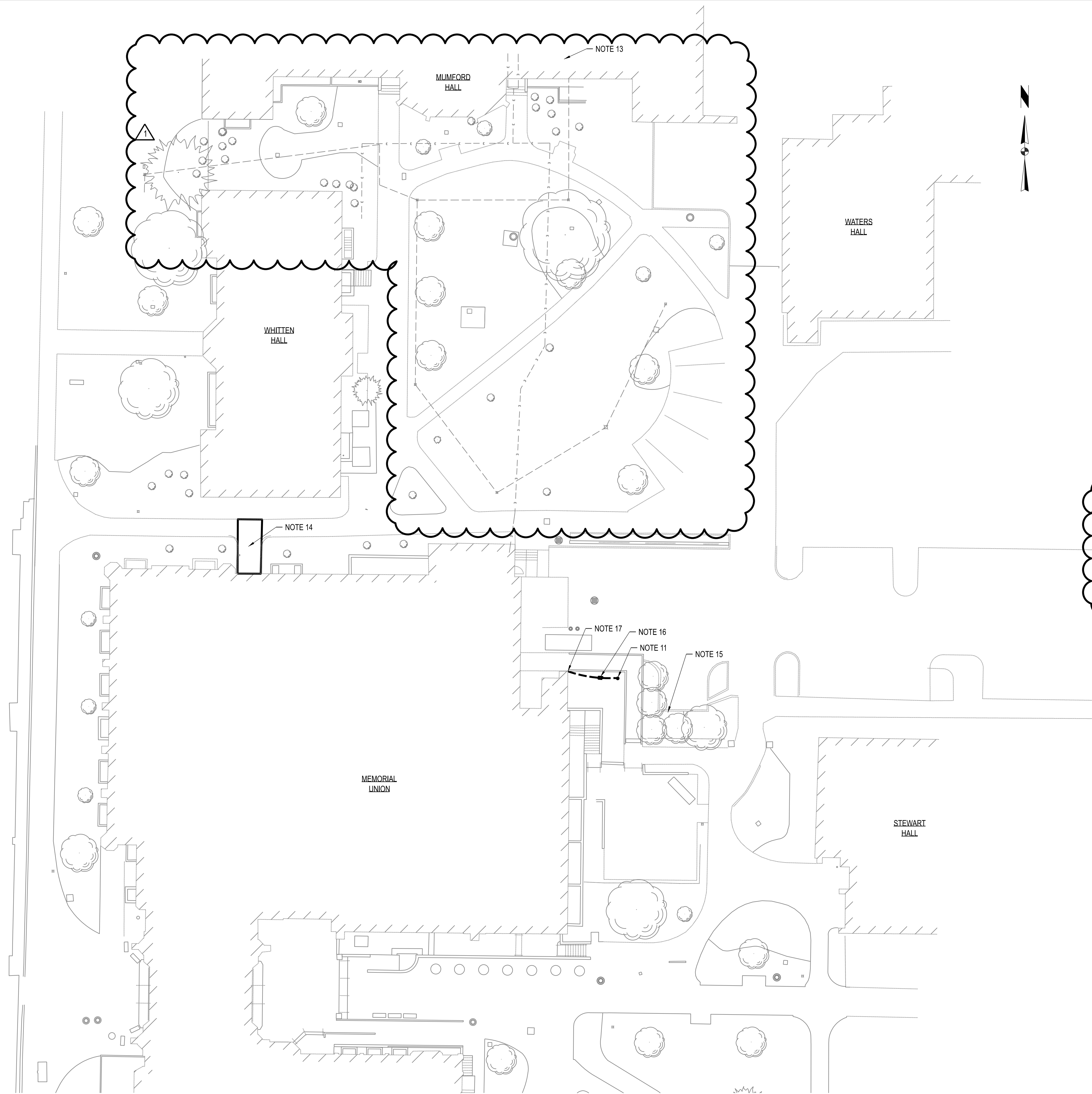


FULL DEPTH REPAIR DETAIL



DETERIORATED CONCRETE SURFACE REPAIR

- NOTE:
- REPAIR CONFIGURATIONS TO BE KEPT AS SIMPLE AS POSSIBLE.
 - CORNERS MUST BE SQUARED TO AVOID FEATHERED EDGES.



NOTES:

1. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF NEW WORK SHOWN ON THIS PLAN. IMMEDIATELY REPAIR ANY DAMAGED UTILITIES TO THE SATISFACTION OF THE OWNER, IN COMPLIANCE WITH THE OWNER'S REQUIREMENTS.
2. COORDINATE ROUTING WITH ALL OTHER SITE UTILITIES (WATER, GAS, STORM, ETC).
3. UNDERGROUND CONDUITS SHALL BE A MINIMUM OF 1" AND CONDUCTORS SHALL BE #10 UNLESS NOTED OTHERWISE.
4. SEE SHEET E200 FOR ADDITIONAL INFORMATION.
5. "PUSH" NEW CONDUIT UNDER EXISTING SIDE WALKS. WHERE NOT POSSIBLE, REMOVE CONCRETE TO INSTALL CONDUIT AND REPLACE TO ADJACENT SURFACES.
6. COORDINATE WITH OWNER FOR CONDUIT ROUTING TO MINIMIZE DISRUPTION TO SIDEWALKS AND DAMAGE TO TREES.
7. SITE FIXTURES AND POLES ARE OWNER FURNISHED, CONTRACTOR INSTALLED. POLE BASE SHALL BE BY CONTRACTOR, SEE DETAIL SHEET E200. SITE FIXTURES ARE TYPE 2 DISTRIBUTION. DIRECTION OF FIXTURE SHOWN SHALL INDICATE ORIENTATION.
8. OWNER FURNISHED LIGHT FIXTURE IS: STERNBERG G18CALED/5PB05PTXRLLED-12L4ST5-MDL14/BK OWNER FURNISHED POLE IS: AMERON, CENTRECON SBQ-4.
9. INSTALLATION SEQUENCE:
 - 9.1. INSTALL HANDHOLES DENOTED BY KEYED NOTE 1. PROVIDE NEW CONDUIT AND CONDUCTORS BETWEEN NEW HANDHOLES.
 - 9.2. DISCONNECT AND REMOVE EXISTING LIGHTING CIRCUITING AS SHOWN ON D101.
 - 9.3. PROVIDE CONNECTION TO EXISTING LIGHTING CIRCUIT TO REMAIN SO THAT EXISTING SITE LIGHTING TO REMAIN IS CONTINUOUS.
 - 9.4. INSTALL NEW SITE LIGHTING FIXTURES AND BALANCE OF CONDUIT/CONDUCTOR.
10. NOT USED.
11. NEW SITE FIXTURE LOCATION. CONTRACTOR SHALL FURNISH AND INSTALL BASE PER DETAIL ON SHEET E200. CONTRACTOR SHALL INSTALL POLE AND FIXTURE FURNISHED BY OWNER. INSTALL NEW LIGHTING CIRCUIT RACEWAYS AND CONDUCTORS. UTILIZE EXISTING TRENCH WHERE POSSIBLE.
12. NOT USED.
13. AT INTERIOR OF MUMFORD HALL IN RESEARCH 29 AND 29A, PROVIDE RELOCATION OF (2) DRYERS. FOR EACH DRYER ACCOUNT FOR (1) 20A, 120V FAN CKT AND (1) 30A, 208V HEATER CKT. PROVIDE FOR DISCONNECTION, RELOCATION, AND RE-INSTALLATION OF EACH DRYER. SEE SHEET M120 FOR MORE INFORMATION ON DRYER LOCATIONS.
14. PROVIDE AND INSTALL NEW RAYCHEM VIAGARD EM2-XR ICE MELT CABLE IN MEMORIAL UNION NORTH ADA RAMP. EXISTING CONTROLLER MAY BE REUSED. RECONNECT EXISTING POWER SUPPLY. PROVIDE NEW GROUND MOISTURE AND TEMPERATURE SENSOR AND KIT WITH RAYCHEM PART NUMBER VIA-DU-S20 AND CONNECT TO EXISTING CONTROLLER WHERE EXISTING SENSOR WAS DEMOLISHED.
15. DURING PERFORMANCE OF PHASE 2, PROTECT THE GOLF CART RECEPTACLE AND ASSOCIATED INFRASTRUCTURE.
16. INTERCEPT EXISTING LIGHTING CIRCUIT FOR DEMOLISHED RAMP LIGHT FIXTURES. PROVIDE NEW HANDHOLE PULLBOX PER DETAIL ON DRAWING E200 AND EXTEND CIRCUIT ROUTED IN CONDUITS TO TO NEW OWNER FURNISHED POLE AND FIXTURE.
17. INSTALL NEW LIGHTING CIRCUIT RACEWAY AND REUSE LIGHTING CIRCUIT WHICH WAS USED FOR THE DEMOLISHED CONCRETE-EMBEDDED FIXTURES THAT WERE FORMERLY MOUNTED IN THE DEMOLISHED CONCRETE RAMP RAILING. ROUTE THROUGH NEW HANDHOLE PULLBOX.

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY.

JEFFERY GAMBRELL
 NUMBER PE-2000173300
 PROFESSIONAL ENGINEER
 02/06/2025
 ENGINEER / ARCHITECT OF RECORD:
 JEFFERY GAMBRELL, PE
 LICENSE NO. PE-2000173300
 PRVN CONSULTANTS, INC.
 1617 SECOND AVE., STE 110
 ROCK ISLAND, IL 61201
 PHONE: 563-263-5160

ISSUED FOR ADDENDUM 1	02/06/25	1
ISSUED FOR BID	01/10/25	0

DRAWN BY: M.A.O. CHECKED BY: J.T.G.

PRVN CONSULTANTS, INC.
 1617 SECOND AVE., STE. 110
 ROCK ISLAND, IL 61201
 PHONE 563.263.5160
 MISSOURI CERTIFICATE OF AUTHORITY ENGINEERING - 2023017805

UNIVERSITY OF MISSOURI - COLUMBIA
 GENERAL SITE - REPLACE UTILITIES
 NEAR MEMORIAL UNION
 COLUMBIA, BOONE COUNTY, MISSOURI 65203
 ELECTRICAL SITE PLAN

UNIVERSITY OF MISSOURI
 PROJECT NUMBER
CP230201

CONSULTANT
 PROJECT NUMBER
24084

SHEET
E101

ELECTRICAL SITE PLAN
 SCALE: 1"=20'-0"