

**Request for Proposal**

<b>RFQ Number</b>	001714
<b>Date Issued</b>	8/1/2023
<b>Closing Date</b>	<b>8/17/2023; 2:00pm local time</b>
<b>Procurement Officer</b>	Sean Burke; 620.235.4167; <a href="mailto:swburke@pittstate.edu">swburke@pittstate.edu</a>
<b>Deadline</b>	EOB 10/31/2023
<b>Item</b>	Yates Hall Steam Tunnel Lid
<b>Agency &amp; Location</b>	Pittsburg State University (PSU) in Pittsburg Kansas
<b>Scope</b>	Pittsburg State University is seeking proposals for repairs to impacted areas as identified in the available structural assessment report and specifications of this request.
<b>Bid Submittal</b>	Submit bid by e-mail to <a href="mailto:swburke@pittstate.edu">swburke@pittstate.edu</a>

1. When communicating, always refer to the Proposal number above.
2. In order to receive consideration for award, one copy of this "Request for Proposal," a properly completed and signed, must be returned to Pittsburg State University no later than the specified closing time. The University is not responsible for late bids.
3. All prices, terms, and conditions must be shown. Additions or conditions not shown on this bid will not be allowed.
4. Prompt payment discounts will not be considered in determining the low bid.
5. Prices quoted shall be less Federal Excise and State Sales taxes.
6. The PSU Director of Purchasing reserves the right to accept or reject any part of this proposal.
7. Bid results will not be given to individuals over the phone. Written bid results may be obtained by written request from the procurement officer.
8. Contractual Provisions Attachment DA-146a applies to all bids.
9. It is hereby agreed that the bidder will, if required by law, comply with the Kansas Act Against Discrimination, K.S.A. 44-1030 et. Seq.
10. PSU reserves the right to award in the best interest of the university.

<b>Vendor Name:</b>	
<b>Demolition:</b>	
<b>Installation:</b>	
<b>Materials:</b>	
<b>Additional Charges: ( )</b>	
<b>Total Bid Amount:</b>	

Please contact Melanie Hudson [mHUDSON@pittstate.edu](mailto:mHUDSON@pittstate.edu) or 620-235-4130 with any questions regarding the specifications.

Please contact Sean Burke [swburke@pittstate.edu](mailto:swburke@pittstate.edu) or 620-235-4167 with any questions regarding the bid process.

Pittsburg State University is seeking proposals for repairs to impacted areas as identified in the available structural assessment report and specifications of this request.

**A. Summary of Scope:**

	<b>Description</b>
<p><b><u>DEMOLITION</u></b></p>	<ol style="list-style-type: none"> <li>1. Remove spalled concrete from areas of concern.</li> <li>2. Cut away concrete around spalled areas until rust free rebar is exposed. Over cut 4” each direction as indicated below.</li> <li>3. Remove all rust from rebar, not using solvents.</li> </ol>
<p><b><u>CONSTRUCTION</u></b></p>	<ol style="list-style-type: none"> <li>1. Replace rebar sections as needed. Provide per unit cost &amp; verify with owner.</li> <li>2. Apply specialty coating with anti-corrosive agents to rebar to prevent further damage.</li> <li>3. Apply repair grout so rebar is no longer exposed to elements.</li> </ol>
<p><b><u>DEADLINE</u></b></p>	<p>October 31, 2023</p>
<p><b><u>NOTES</u></b></p>	<p>Project is tax exempt.</p>

Detailed structural assessment report available as Attachment A.

Detailed plan drawings available as Attachment B.

**B. Quote Requirements:**

I. Quote Requirements

- a. Quotes must itemize cost for removal, installation, and materials.
- b. Quotes must include estimated shipping & delivery timeframes.
- c. Quotes must include all fees that will be invoiced to PSU.
- d. Quotes must be received by PSU before the deadline specified in this RFP. Failure to submit quotes to PSU on time will result in disqualification.
- e. Submissions are preferred by email to Sean Burke – [swburke@pittstate.edu](mailto:swburke@pittstate.edu). Submissions by standard mail are allowed, if vendor chooses to mail submission, please send to:

Purchasing Office  
 1701 S Broadway Street  
 110 Russ Hall  
 Pittsburg, KS 66762

\* Please note that no exceptions will be made for late delivery of mailed submissions.

**C. Terms and Conditions**

**\* Terms and conditions are available after Attachment B.**

**E. General Provisions Signature**

**Tax Clearance Certification:** Bid submittals of \$25,000 or more shall include a copy of a Tax Clearance Certification. Tax Clearances may be obtained from the Kansas Dept. of Revenue (KDOR): <http://www.ksrevenue.org/taxclearance.html>

**W9 Form:** Vendors who are new to PSU should submit a copy of their W9 with bid response. The form can be downloaded at [www.irs.gov/pub/irs-pdf/fw9.pdf](http://www.irs.gov/pub/irs-pdf/fw9.pdf)

**DA-146a Contractual Provisions:** The bidder agrees to accept the provisions of form DA-146a, Contractual Provisions Attachment which is incorporated into all contracts with the State <http://www.da.ks.gov/purch/DA-146a.pdf>

**NEW MATERIALS, SUPPLIES, OR EQUIPMENT:** Unless otherwise specified, all materials, supplies or equipment offered by a vendor shall be new, and unused in any regard. All materials, supplies and equipment shall be first class in all respects. Seconds or flawed items will not be acceptable. All materials, supplies or equipment shall be suitable for their intended purpose and, unless otherwise specified, fully assembled and ready for use on delivery.

**PUBLIC WORKS BOND:** A Public Works Bond is not required for Projects with a contract price below \$100,000.00. The Contractor shall file with the Director of Purchasing a Public Works Bond as required by K.S.A. 60-1111 in an amount equal to one hundred percent (100%) of price bid and shall be filed with the Clerk of the District Court in the County where the project is being constructed.

The guaranty shall be returned to the Contractor upon the completion of this contract subject to total or partial forfeiture for failure to perform adequately the terms of this contract. If damages exceed the amount of the guaranty, the State may seek additional damages.

**ACCEPTANCE OR REJECTION:** PSU reserves the right to accept or reject any or all bids or part of a bid; to waive any informalities or technicalities; clarify any ambiguities in bids; and unless otherwise specified, to accept any item in the bid.

**PAYMENT:** Payment will be made upon receipt completion.

**FREIGHT COST INFORMATION:** FOB Destination, Freight Prepaid, and Allowed.

The undersigned certifies that he does not have any substantial conflict of interest sufficient to influence the bidding process on this bid. A conflict of substantial interest is one which a reasonable person would think would compromise the open competitive bid process.

Legal Name of Person, Firm or Corporation:

Payment Terms:

Telephone Number:

E-mail Address:

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**PSU RFP001714 ATTACHMENT A**



**Yates Hall Steam Tunnel**  
**Pittsburg State University**

**Structural Assessment Report**

**Prepared For:**  
Lindell Haverstic  
University Planning, Design, and Construction  
Pittsburg, KS

**PEC Project No.:**  
217063-001

**Prepared by:**  
Larissa Minihan, I.E.  
Paul Radley, P.E.  
KS PE# 24034

**Date:**  
October 20, 2022

# Purpose

Professional Engineering Consultants, P.A. (PEC) was engaged by Pittsburg State University to perform an assessment of the steam tunnel lid located behind Yates Hall in Pittsburg, KS. The purpose of the assessment is to review the condition of the concrete lid after excessive spalling was observed and provide repair recommendations. The tunnel lid is used for pedestrian traffic and occasionally vehicle traffic.

The structural scope of services includes observations of the existing conditions, production of a written report documenting the observations, and to provide an assessment (conclusions and recommendations) based on the observations. Environmental assessment including, but not limited to, asbestos, lead based paint, mold and water intrusion is expressly excluded from the scope of work.

The evaluation of the property for elements routinely provided by other disciplines, not listed above, is excluded from the report.

# Observations

The observations were performed on August 3, 2022. The observations were performed by Larissa Minihan, I.E. with University Architect Lindell Haverstic and Plumbing Supervisor John Foster.

The original construction of the tunnel consists of a six inch reinforced concrete slab bearing on two eight inch reinforced concrete retaining walls on either side of the tunnel. The slab spans five feet clear from inside face of tunnel wall to inside face of tunnel wall.

Areas of rust staining, concrete cracking, and concrete spalling were observed throughout the length of the steam tunnel lid.

## EXTERIOR RUST SPOTS

Rust spots were visible throughout the length of the tunnel on the top side of the slab.





## EXTERIOR CRACKING

Cracks were observed when viewing the top of the steam tunnel lid from outside Yates Hall. One crack in the concrete propagated the full width of the steam tunnel.



## EXTERIOR SPALLING

In multiple locations on the top side of the slab, the concrete spalled and the welded wire fabric reinforcing was exposed to the elements.



## INTERIOR CRACKING - LID

Observed interior cracking propagated along the width of the tunnel. Some full width cracks may have been control joints from the original construction of the tunnel.





## INTERIOR CRACKING - LID (CONT.)



## INTERIOR CRACKING - WALLS

At multiple locations throughout the length of the tunnel, cracking in the walls was observed. The cracks were located near the top of the wall adjacent to the connection to the tunnel lid.

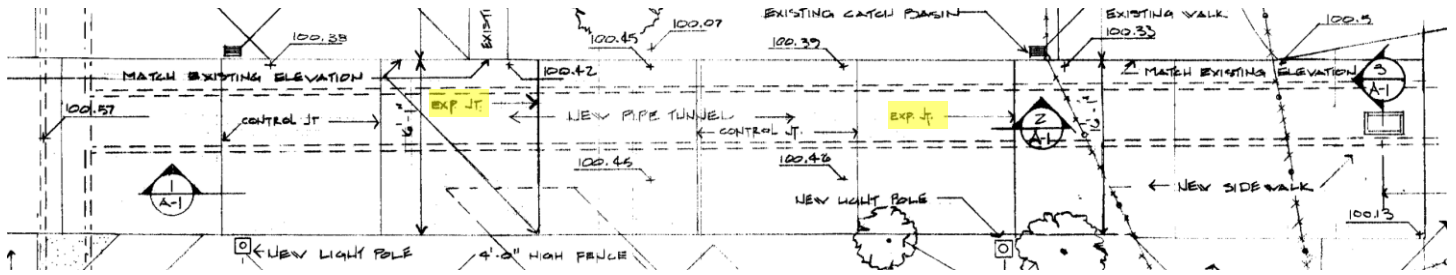


## INTERIOR SPALLING

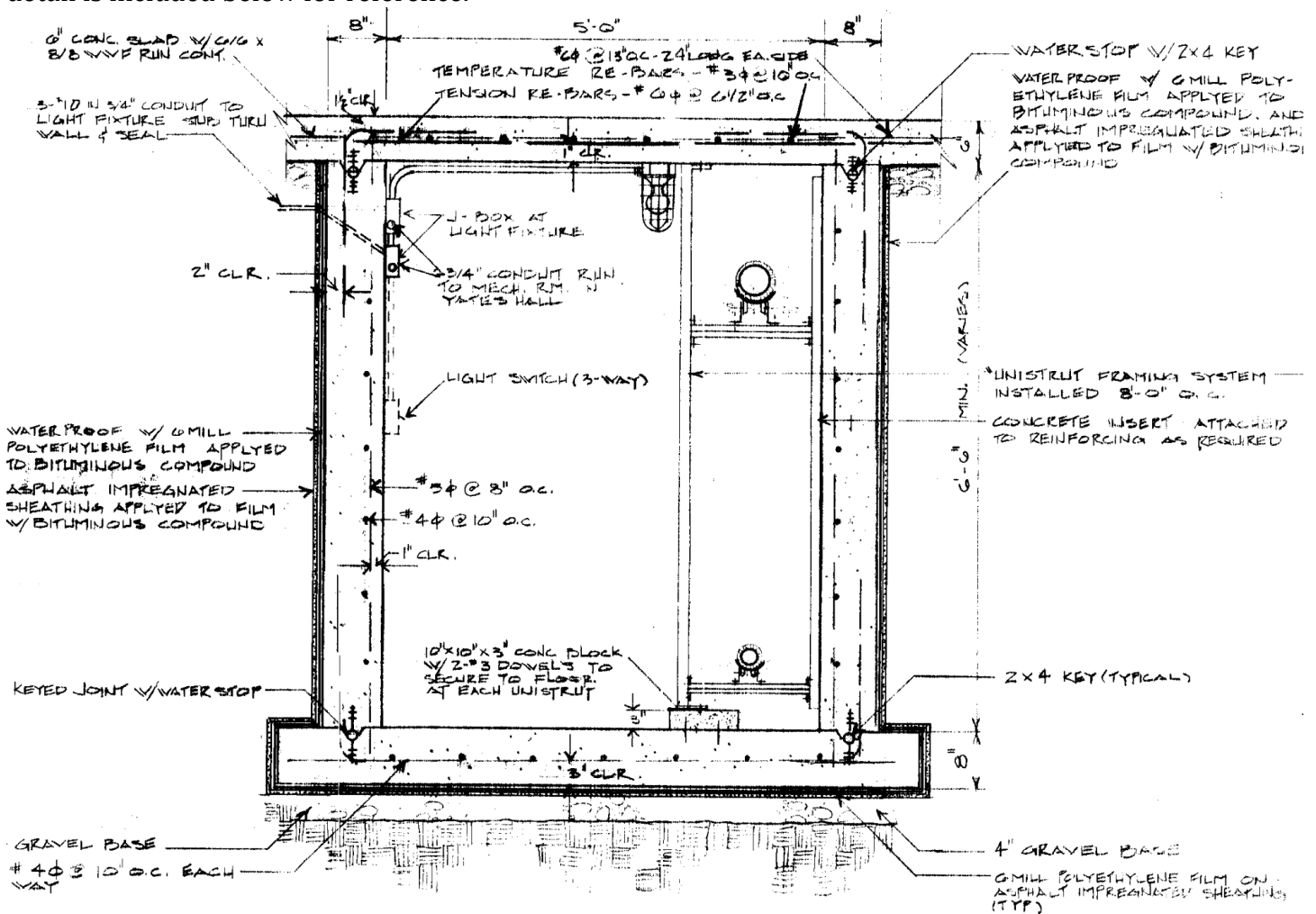
Large pieces of spalled concrete were observed within the tunnel in various locations. The impacted areas had been shored to try to mitigate further movement of the concrete so not all damage was able to be observed.



The original construction documents, dated August 11, 1980, were reviewed as part of this assessment. The drawings indicate two expansion joint locations in the tunnel lid. The drawings also note that control joints are to be at 16'-0" o.c. maximum.



The section through the tunnel indicates there are to be waterstops and keys between the top of the tunnel walls and the concrete lid. The concrete slab is to be reinforced with welded wire fabric, #6 tension bars at 6½" on center, and #3 temperature reinforcement at 10" on center. The strength of the concrete was not called out. A concrete strength of 3,000 psi was assumed for calculation purposes. The detail is included below for reference.



## Conclusions

Based on the observations, it is our professional opinion spalling concrete exposed the reinforcing and has allowed water to infiltrate the slab and degrade the interface between the concrete and reinforcing. Reinforcing that is exposed to water, de-icing agents, etc. will rust. As the rebar within the slab corrodes and expands, the surrounding concrete will begin to spall.



Based on visual observations, all the locations with excessive spalling also have rusted reinforcing visible. Water penetrating the slab appears to be a long standing issue based on the stalactites forming at crack locations. There is also sealant visible in locations that should be control joints instead of expansion joints as viewed from the top of the slab. This could indicate an attempt to remedy the water infiltration issues.

It was difficult to align the observed damage within the tunnel to the tunnel lid as observed from above in the exterior photos. It is possible some of the interior cracks observed that were straight across the width of the tunnel were due to control joint locations on the surface of the tunnel lid. The control joints provide a location for the concrete to crack in a controlled manner. These cracks are caused by concrete movement due to temperature changes and shrinkage while drying. They are expected as the concrete ages and are not cause for concern. It is recommended to seal these cracks against water infiltration.

The spalled concrete on top of the slab reveals that the welded wire fabric reinforcing does not have the concrete cover of 1½" to the surface of the slab as indicated in the detail. To protect the reinforcing from water infiltration and subsequent damage, the reinforcing should have been placed to maintain the indicated clear distance between it and the top of the slab. The American Concrete Institute (ACI) requires a cover of 1" minimum between top of concrete and reinforcing for exposed slabs. From the images provided in the exterior spalling section, it is shown that the depth between the top of concrete and the welded wire reinforcing is less than required.

An analysis was performed for a unit width of the tunnel lid. The slab was checked for a pedestrian load of 100 pounds per square foot. It was also checked for a vehicular load of 640 pounds per lineal foot based on AASHTO loading requirements. The results of the calculations indicate that the construction of the slab should be adequate for pedestrian loading as well as maintenance vehicles.

However, if the slab is subjected to extreme loading in excess of the loads analyzed or cyclical heavy loading, the slab could become overstressed. It was determined from the calculations that the slab would be at its maximum capacity with a load of approximately 3,100 lbs located at the center of the tunnel. This result is based on the original design of the tunnel lid and does not account for the degradation that has already occurred. It is unclear what caused the initial spalling of the tunnel lid. However, periodic heavy loads cause changes in the deflection of the slab which can exacerbate the spalling issue.

Due to the spalled concrete, the slab then has reduced capacity from the loss of concrete section and the degradation of the reinforcing. An inch of concrete section loss (5" slab instead of 6") reduces the capacity of the existing slab by 27%. Degraded rebar experiencing more than 15% section loss (reduced to 5/8" diameter) reduce the capacity of the slab by 14%. Where there is spalled concrete, there is also likely to be degraded reinforcing. The combined effects of these two factors reduce the capacity of the slab by a third.

Concern was expressed that the north side of the tunnel slab appeared to be lower than the rest of the slab. The elevations provided on the original construction drawings indicate the elevations on either side of the tunnel differ. The slab may have been formed with a slope for drainage purposes. Some slab settlement is normal and expected to occur but there were no indications of excessive slab settlement on one side of the tunnel.

It was also noted in the report that there were cracks visible in the wall of the tunnel past the hatch, where the tunnel lid drops in elevation. The cracks in the walls are not cause for structural concerns at this time.

## Recommendations

Based on the observations, PEC recommends repairing the impacted areas as indicated in the construction documents prepared by PEC dated October 20, 2022. The exposed rebar will need to be cleaned of all rust and the concrete replaced to avoid continued degradation.

While repairing the notable areas of concern, it is also recommended to patch minor cracks or spalling in the tunnel lid and walls with the repair grout.

PEC would appreciate the opportunity to assist in implementing the recommendations in this report. Please do not hesitate to contact us if we can be of further service.

## Disclaimer

*This assessment was based on the conditions readily observable at the time of the assessment and any related inspection. Subsequent deterioration of the property may have occurred since the time of any such inspection. There may be unforeseen or hidden damage that was not observed at the time of the observation due to a number of possible issues. No subsurface or other intrusive investigation was made.*

*No survey was performed to determine any dimensions or boundaries.*

*PEC does not have any beneficial interest in the subject property. This report is a qualitative assessment of the property. Construction and/or renovation of the property based on the conclusions or recommendations should not begin until a full set of construction documents are prepared by a licensed professional. The report is written solely for the use of the client listed above and no other party shall have the right to rely on the information contained in the report. This report is not transferable to a third party without written permission of PEC. Reproductions of this report, not bearing the original engineer's signature, are invalid. This Assessment was limited to the items specifically included in the scope of work. Nothing in this report shall be deemed to imply or suggest anything beyond what is specifically stated.*



**DESIGN CRITERIA**

- BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION, INCLUDING LOCAL SUPPLEMENTS. THE STRUCTURE IS CLASSIFIED AS A RISK CATEGORY III FACILITY.
- DEAD AND LIVE LOADS:
 

LOCATION	UNIFORM LIVE LOAD	CONCENTRATED LIVE LOAD	TOTAL DEAD LOAD*
SLAB	100 PSF	2,000 LB	75 PSF

FLOOR LIVE LOADS ON SUPPORTING ELEMENTS SHALL NOT BE REDUCED IN ACCORDANCE WITH THE BUILDING CODE.  
\*TOTAL DEAD LOAD INCLUDES WEIGHT OF STRUCTURAL ELEMENTS.
- SNOW LOADS
 

GROUND SNOW LOAD, P <sub>g</sub> :	15 PSF
FLAT ROOF SNOW LOAD <sup>§</sup> , P <sub>f</sub> :	15 PSF
SNOW EXPOSURE FACTOR, C <sub>e</sub> :	1.0
SNOW IMPORTANCE FACTOR, I <sub>s</sub> :	1.1
THERMAL FACTOR, C <sub>t</sub> :	1.0
ROOF SLOPE FACTOR, C <sub>s</sub> :	1.0
- WIND:
 

BASIC WIND SPEED, V:	116 MPH (3 SECOND GUST)
ALLOWABLE STRESS DESIGN WIND SPEED, V <sub>asd</sub> :	90 MPH (3 SECOND GUST)
WIND EXPOSURE C:	C
INTERNAL PRESSURE COEF.:	+/-0.18
- SEISMIC:
 

SITE CLASS:	D
SEISMIC DESIGN CATEGORY:	B
SEISMIC IMPORTANCE FACTOR:	1.25
C <sub>s</sub> :	0.118
C <sub>d</sub> :	0.074
C <sub>w</sub> :	0.126
C <sub>t</sub> :	0.118

**CONCRETE**

- ALL CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 318 AND THE BUILDING CODE, AND IN CONFORMANCE WITH THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE."
- THE CONCRETE REQUIREMENTS ARE:
  - CEMENT SHALL BE TYPE I OR II CONFORMING TO ASTM C150 OR TYPE II CONFORMING TO ASTM C595. FLY ASH CONFORMING TO ASTM C618 TYPE C OR F MAY BE USED TO REPLACE A MAXIMUM OF 20% OF THE CEMENT BY WEIGHT.
  - FINE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.
  - COARSE AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33, GRADE 67 OR LARGER. COARSE AGGREGATES SHALL BE NO LESS THAN 50% OF THE TOTAL AGGREGATE BY WEIGHT, UNLESS APPROVED BY THE ENGINEER PRIOR TO MIX DESIGN SUBMITTAL.
  - MIX REQUIREMENTS ARE:
 

LOCATION	F <sub>c</sub> (PSI)	MINIMUM CEM. (PCY)	MINIMUM CEM. (PCY)	MAX. W/C RATIO	AIR CONTENT	SLUMP INCHES <sup>§</sup>
EXTERIOR/FNDN. WALL	4,000	470	470	0.45	5%±1%	2-5
BEAM AND SLABS*	4,000	470	470	0.45	5%±1%	2-5

§ PRIOR TO THE ADDITION OF WATER REDUCING ADMIXTURES. IF APPROVED BY ENGINEER, SLUMP MAY NOT EXCEED 8" WITH THE ADDITION OF WATER REDUCING ADMIXTURES  
\*SLAB SHALL HAVE A FLEXURAL STRENGTH OF 650 PSI WHERE SUBJECT TO VEHICLE TRAFFIC.
- ADMIXTURES, HARDENERS, & CURING COMPOUNDS
  - ALL CONCRETE ADMIXTURES SHALL, WHEN MIXED INTO CONCRETE, BE NON-CHLORIDE AND NON-CHLORIDE FORMING.
  - ALL ADMIXTURES MUST CONFORM TO ASTM C-494 AND C-260.
  - CONCRETE CURING COMPOUND AND SEALERS SHALL MEET ASTM C-309 TYPE 1 OR 1D.
  - USE OF "SELF CONSOLIDATING" CONCRETE MUST BE SUBMITTED FOR APPROVAL WITH THE CONCRETE MIX DESIGN.
- MISCELLANEOUS CONCRETE DETAILS:
  - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE THE FORMS OR TOOLED TO 3/4" RADIUS UNLESS NOTED OTHERWISE.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING AND SHORING.
  - SAW CUTTING OF EXISTING STRUCTURAL CONCRETE.
    - THE CONTRACTOR SHALL HAVE ALL STRUCTURAL CONCRETE INTENDED TO BE CORED OR CUT INVESTIGATED WITH GROUND PENETRATING RADAR (GPR) PRIOR TO CUTTING/CORING. LOCATION OF REINFORCING SHALL BE REPORTED TO THE ENGINEER OF RECORD (EOR). THE EOR MAY DIRECT THE CONTRACTOR TO ADJUST THE OPENING LOCATION TO REDUCE THE QUANTITY OF EXISTING REINFORCING THAT WILL BE CUT.
    - ALL NEW CIRCULAR OPENINGS SHALL BE CORE DRILLED. ALL NEW RECTANGULAR OPENINGS SHALL BE CORE DRILLED IN EACH CORNER TO PREVENT OVERCUTTING BEYOND THE INTENDED CORNERS. THE CONTRACTOR SHALL APPLY APPROPRIATE PRESSURE TO THE EQUIPMENT TO PREVENT SPALLING OVER 1/2" ON THE BACK SIDE OF THE OPENING.

**CONCRETE REINFORCING**

- MATERIALS
 

ASTM	GRADE
PLATE & ANGLE:	A36
REINFORCING STEEL:	A615 60
WELDED WIRE FABRIC (WWF):	A185 60 (MIN.)
- DETAILS:
  - WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS NOTED OTHERWISE. WHEN WELDING IS APPROVED, WELDING SHALL BE IN ACCORDANCE WITH AWS D1.4 "WELDING REINFORCING STEEL, ETC."
  - WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS.
  - SHOP DRAWINGS SHALL BE SUBMITTED WITH REINFORCING STEEL IN ACCORDANCE WITH ACI 315.
- PLACEMENT:
  - ALL REINFORCING AND EMBEDMENTS SHALL BE SUPPORTED ON CHAIRS/BOLSTERS TO THE DESIGN DIMENSIONS. SPACING SHALL BE SUFFICIENTLY CLOSE TO PREVENT DISPLACEMENT OR PERMANENT DEFORMATION DUE TO CONCRETE PLACEMENT, FOOT TRAFFIC, OR VIBRATION. "PUDDLING IN" OR "PULLING UP" REINFORCING IS NOT AN ACCEPTABLE METHOD FOR PLACING REINFORCING. CHAIRS/BOLSTERS SHALL HAVE PLASTIC COATED FEET OR BE MADE OF STAINLESS STEEL. CHAIRS/BOLSTERS IN CONTACT WITH EARTH SHALL HAVE BOTTOM PLATES AND BE COATED TO PREVENT CORROSION. ANCHOR RODS SHALL BE HELD IN PLACE WITH TEMPLATES SUFFICIENTLY STRONG TO PREVENT DISPLACEMENT OR TILTING.
  - MAINTAIN ACI CLEAR COVER ON REINFORCING AS LISTED BELOW UNLESS NOTED OTHERWISE.
 

FORMED - EXPOSED TO SOIL, WEATHER OR LIQUIDS:	2"
SLABS ON GRADE (FROM TOP OF SLAB):	1.5"
  - REINFORCING STEEL SHALL BE LAPPED PER TABLE A.
  - WELDED WIRE FABRIC SHALL BE LAPPED ONE FULL SQUARE PLUS 2".

**POST INSTALLED ANCHORING SYSTEMS**

- SUBSTITUTION OF POST INSTALLED ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER IN ADVANCE.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPI) AND THE EVALUATION REPORT (ER/ESR) SPECIFIED INCLUDING HOLE PREPARATION, TEMPERATURE AND MOISTURE CONDITIONS.
- ADHESIVE ANCHORS:
  - THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL ANCHOR PRODUCTS SPECIFIED. THE CONTRACTOR MUST MAINTAIN TRAINING RECORDS OF ALL CONTRACTOR PERSONNEL INSTALLING ANCHORS AND SUBMIT TO THE ENGINEER OF RECORD PRIOR TO INSTALLING ANCHORS UPON REQUEST.
  - ADHESIVE ANCHORS SHALL BE USED IN CONJUNCTION WITH THE APPROPRIATE ADHESIVE SYSTEM. STANDARD REINFORCING STEEL ANCHORED IN CONCRETE SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE.
  - APPROVED ADHESIVE ANCHORS FOR PREVIOUSLY CAST CONCRETE:
 

MANUFACTURER/PRODUCT	REPORT NUMBER
HILTI HIT-HY200 SSS* WITH HIT-Z ROD	ICC-ES ESR-3187
HILTI HIT-HY200 SSS* WITH HOLLOW BIT & HAS-E ROD	ICC-ES ESR-3187
HILTI HIT-HY200 SSS* WITH HOLLOW BIT & STEEL REINFORCING	ICC-ES ESR-3187
*SAFE SET SYSTEM	
SIMPSON STRONG-TIE SET-XP	ICC-ES ESR-2508
SIMPSON STRONG-TIE AT-XP	IFMO-UES ER-263

**CONTRACT/CONSTRUCTION DOCUMENTS**

- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A FULL SET OF THE MOST RECENT REVISIONS OF EACH DOCUMENT INCLUDING ALL PLANS, SPECIFICATIONS, ADDENDA, AND SUPPLEMENTAL INSTRUCTIONS.
- THE CONTRACTOR SHALL REVIEW THE DOCUMENTS PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY MATERIALS FOR CONFLICTS. IF CONFLICTS OCCUR THE CONTRACTOR SHALL USE THE MOST STRINGENT REQUIREMENT OR REQUEST A CLARIFICATION THROUGH A REQUEST FOR INFORMATION (RFI).
- THE DOCUMENTS MAY NOT BE REPRODUCED IN WHOLE OR IN PART FOR USE ON PROJECTS OTHER THAN IDENTIFIED IN THE TITLE BLOCK. SHOULD THE CONTRACTOR USE THE DOCUMENTS AS A PORTION OF A SHOP DRAWING SUBMITTAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CONSEQUENCES RESULTING FROM ERRORS IN THE REPRODUCED DOCUMENTS.
- DETAILS LABELED TYPICAL ARE INTENDED TO REPRESENT A CONDITION THAT OCCURS AT SEVERAL LOCATIONS IN THE PLANS WHETHER OR NOT THE DETAIL IS REFERENCED.
- DO NOT SCALE THE PLANS AND DETAILS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.

**CONTRACTOR'S RESPONSIBILITY**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL SUB-CONTRACTOR SUBMITTALS AND NOTING ALL DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTING TO THE ENGINEER FOR REVIEW.
- SUBSTITUTION REQUESTS SHALL BE SUBMITTED IN WRITING WITH THE COST REDUCTION AMOUNT AND THE SCHEDULE IMPACT FOR THE OWNER (SUBMITTALS WITHOUT THE COST AND SCHEDULE IMPACT WILL NOT BE REVIEWED). A COMPARISON OF THE DATA WITH THE MATERIAL SPECIFIED INCLUDING CODE APPROVALS SHALL BE PROVIDED.
- REQUESTS FOR INFORMATION (RFI) SHALL BE SUBMITTED IN WRITING WITH COST, SCHEDULE IMPACT, AND SUGGESTED SOLUTION INCLUDED. AN RFI THAT DOES NOT INCLUDE THE COST AND SCHEDULE IMPACT WILL NOT BE REVIEWED.
- DEFECTIVE WORK REPORT (DWR) SHALL BE SUBMITTED TO THE ENGINEER WITHIN (2) WORKING DAYS OF THE OCCURRENCE. THE DWR SHALL REPORT THE DEFECT AND PROPOSE A REMEDIATION OF THE DEFECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REMEDIATION OF THE DEFECT INCLUDING ENGINEERING COSTS, IF ANY.
- WHEN THE CONTRACTOR BECOMES AWARE OF WHAT MAY BE AN UNFORESEEN CONDITION THAT COULD AFFECT COST OR SCHEDULE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING WITHIN (2) WORKING DAYS. AFTER REVIEW AND ENGINEER'S DETERMINATION THAT AN UNFORESEEN CONDITION EXISTS, THE CONTRACTOR SHALL SUBMIT A CHANGE ORDER REQUEST FOR APPROVAL WITH BOTH COST AND SCHEDULE IMPACT ATTACHED.
- THE CONTRACTOR'S SCHEDULE MUST PROVIDE A REASONABLE TIME ALLOWANCE FOR THE ENGINEERING REVIEW AND APPROVAL.

- THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR SITE SAFETY. THE ENGINEER IS RESPONSIBLE FOR FOLLOWING THE CONTRACTOR'S CONSTRUCTION SITE SAFETY INSTRUCTIONS PROVIDED IN WRITING. ALTERNATELY, THE CONTRACTOR SHALL ASSIGN AN ESCORT TO ADVISE THE ENGINEER OF SITE SAFETY ISSUES DURING SITE VISITS. THE ENGINEER'S PURPOSE OF A SITE VISIT IS SOLELY TO BECOME FAMILIAR WITH THE GENERAL PROGRESS AND QUALITY OF THE PROJECT. THE ENGINEER'S SITE VISIT IS NOT A QUALITY CONTROL FUNCTION.

**CONSTRUCTION MEANS AND METHODS ISSUES**

- SLAB ON GRADE AND ELEVATED SLABS ARE NOT DESIGNED TO SUPPORT CRANES, FORKLIFTS, TRUCKS, MANLIFTS, OR OTHER CONSTRUCTION RELATED EQUIPMENT UNLESS NOTED AS SUCH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF CONSTRUCTION EQUIPMENT CAN BE SAFELY OPERATED ON THESE SLABS AND TO REPAIR ANY DAMAGE THE EQUIPMENT MAY CAUSE.
- THE CONSTRUCTION DOCUMENTS REPRESENT A STABLE STRUCTURE IN THE COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY BRACING AND/OR SHORES TO SAFELY CONSTRUCT THE BUILDING AND PREVENT DAMAGE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION THAT MAY AFFECT THE PROJECT AND REPORT DISCREPANCIES TO THE ENGINEER. ANY DIMENSIONS FOR ELEVATIONS THAT IMPACT NEW WORK SHALL BE VERIFIED PRIOR TO FABRICATION OF ANY MATERIAL. EXISTING BUILDING ELEMENTS THAT ARE TO BE ABANDONED THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED.
- WHEN A PIECE OF EQUIPMENT (HVAC, ELECTRICAL, KITCHEN, ETC.) IS PROVIDED THAT IS DIFFERENT THAN THE EQUIPMENT THAT THE STRUCTURE WAS DESIGNED FOR EITHER BY SIZE, WEIGHT OR CONFIGURATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REMEDY OF THE SITUATION. THOSE COSTS SHALL INCLUDE THE ENGINEERING COSTS TO REDESIGN PORTIONS OF THE STRUCTURE TO ACCOMMODATE THE SUBSTITUTED EQUIPMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRUCTURAL DESIGN AND MATERIALS FOR ATTACHING NON-STRUCTURAL ELEMENTS TO ANY PORTION OF THE STRUCTURE TO RESIST ALL LOADS, INCLUDING SEISMIC, IN A WAY THAT DOES NOT OVERSTRESS STRUCTURAL MEMBERS. NON-STRUCTURAL ELEMENTS CAN BE FOUND IN EACH OF THE OTHER DISCIPLINES (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.).

**STRUCTURAL TESTS, INSPECTIONS, AND QUALITY ASSURANCE**

- ALL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED PER CHAPTER 17 OF THE BUILDING CODE WITH LOCAL SUPPLEMENTS, UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED.

**TABLE A - REINFORCEMENT LAPS, EMBEDMENTS, AND HOOK LENGTHS**

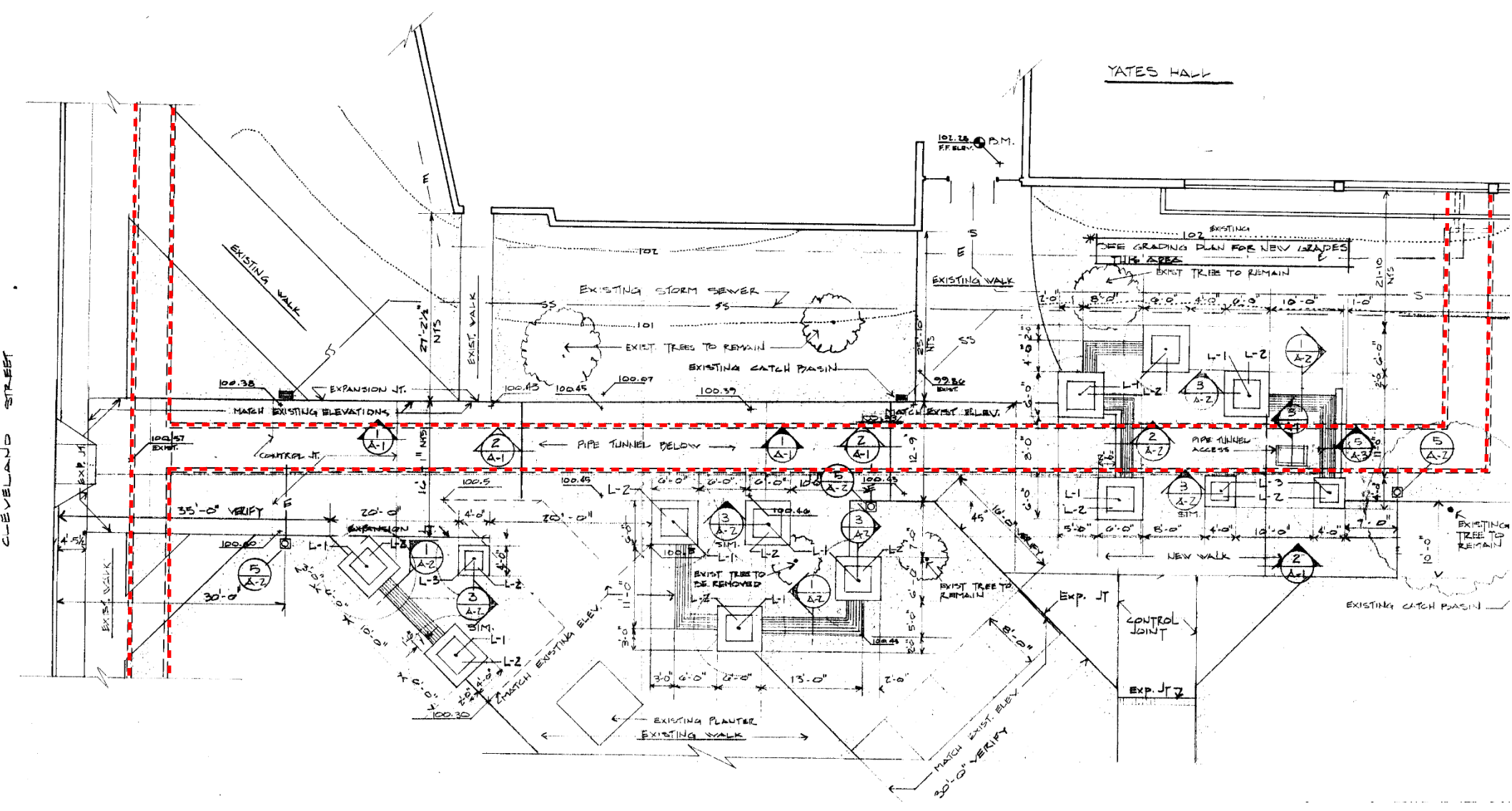
BAR SIZE (d)		CLEAR SPACING (s)			EMBEDMENT & CLASS A LAP (m)		CLASS B LAP (m)		HOOK (m)								
		2d	3d	5d	TOP BAR	OTHER BARS	TOP BAR	OTHER BARS									
3	3/4	1 1/2	1 1/2	1 1/2	28	18	12	21	14	12	36	24	14	28	18	12	8
4	1	1 1/2	2 1/2	2 1/2	37	25	15	28	19	12	48	32	19	37	25	15	10
5	1 1/4	1 1/2	3 1/2	3 1/2	46	31	18	36	24	14	60	40	24	46	31	18	12
6	1 1/2	2 1/4	3 1/4	3 1/4	55	37	22	43	28	17	72	48	29	55	37	22	15
7	1 3/4	2 3/4	4 1/4	4 1/4	81	54	32	62	42	25	105	70	42	81	54	32	18
8	2	3	5	5	92	62	37	71	47	28	120	80	48	92	62	37	20
9	2 1/4	3 3/4	5 1/2	5 1/2	104	70	42	80	54	32	136	90	54	104	70	42	22
10	2.54	3.81	6.35	6.35	117	78	47	90	60	36	153	102	61	117	78	47	25
11	2.82	4.23	7.05	7.05	130	87	52	100	67	40	170	113	68	130	87	52	27

**NOTES:**  
 1. LENGTHS SHOWN CONFORM WITH NON-SEISMIC PROVISIONS OF ACI 318 FOR UNCOATED BARS.  
 2. BAR CLEAR SPACING IS THE CENTER TO CENTER BAR SPACING MINUS ONE BAR DIAMETER.  
 3. CLASS A LAP LENGTHS APPLY WHEN BAR LAPS ARE STAGGERED TO LAP HALF THE BARS AT THE SAME LOCATION. USE CLASS B LAP FOR ALL OTHER CASES.  
 4. TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE REINFORCEMENT.  
 5. MULTIPLY LAP AND EMBEDMENT LENGTHS GIVEN BY 2.0 FOR BARS WITH CLEAR SPACING OF TWO BAR DIAMETERS OR LESS, OR CONCRETE COVER OF ONE BAR DIAMETER OR LESS.  
 6. TABLE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS ONLY.

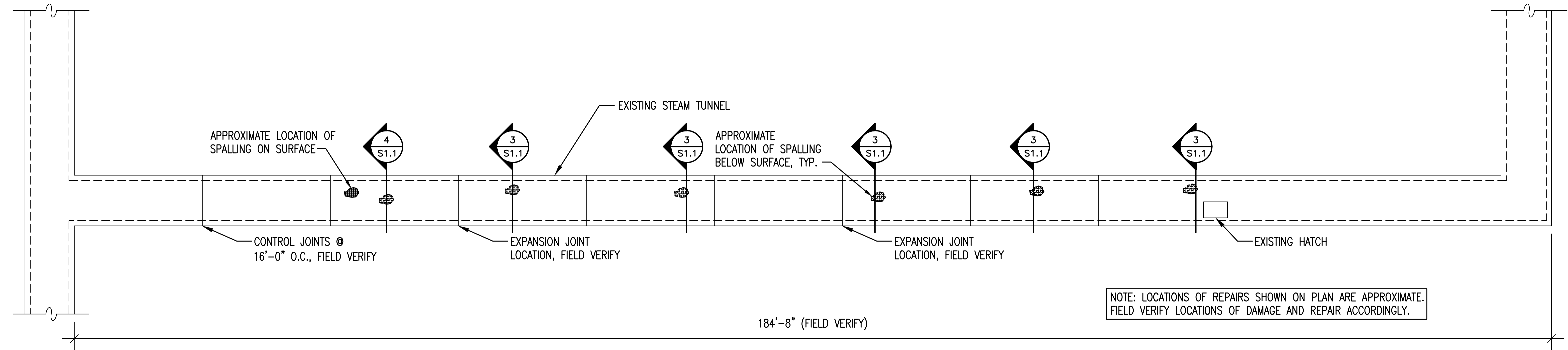


YATES HALL TUNNEL  
PITTSBURG STATE UNIVERSITY  
PITTSBURG, KS

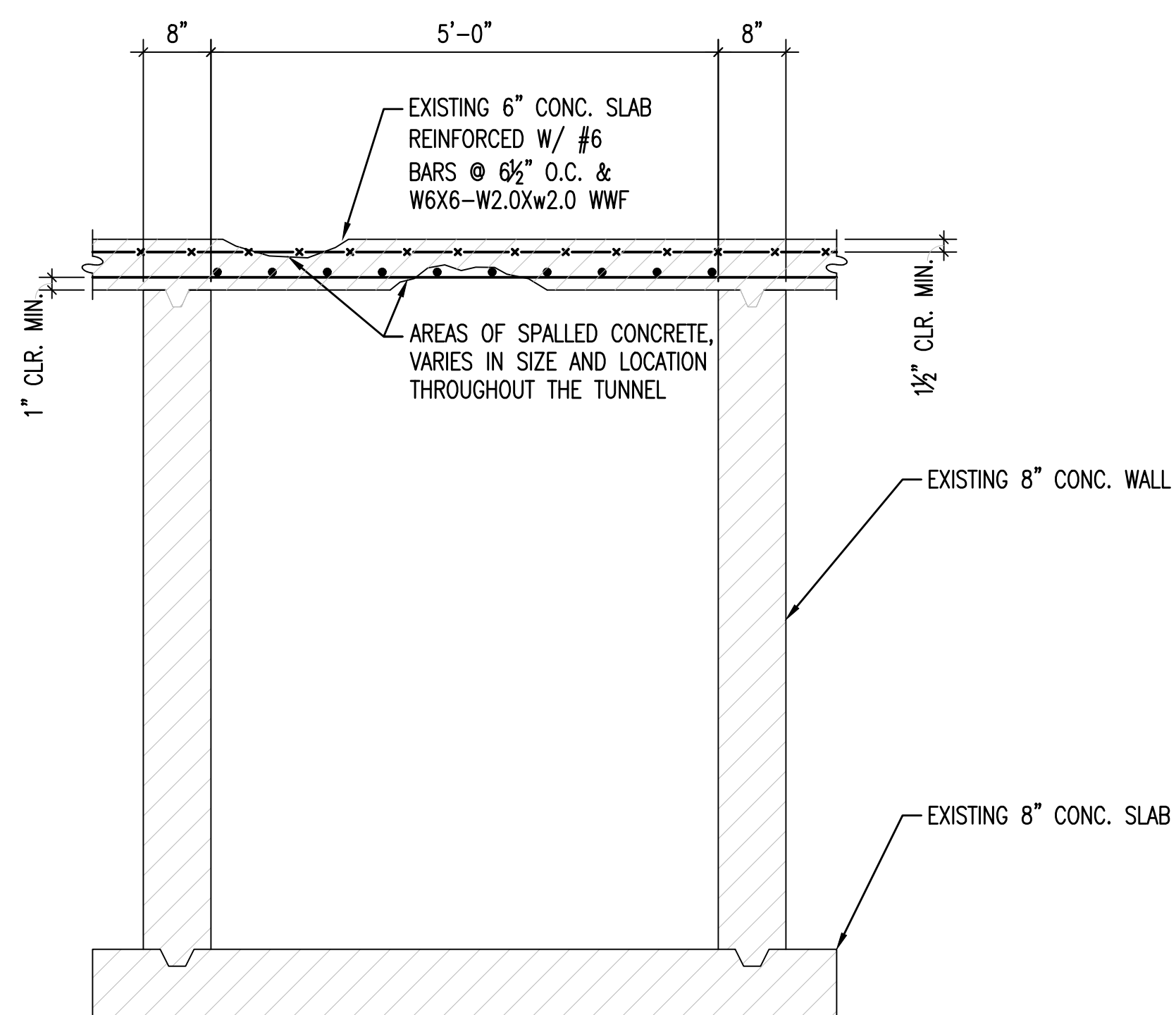




**1 KEY PLAN**  
NTS

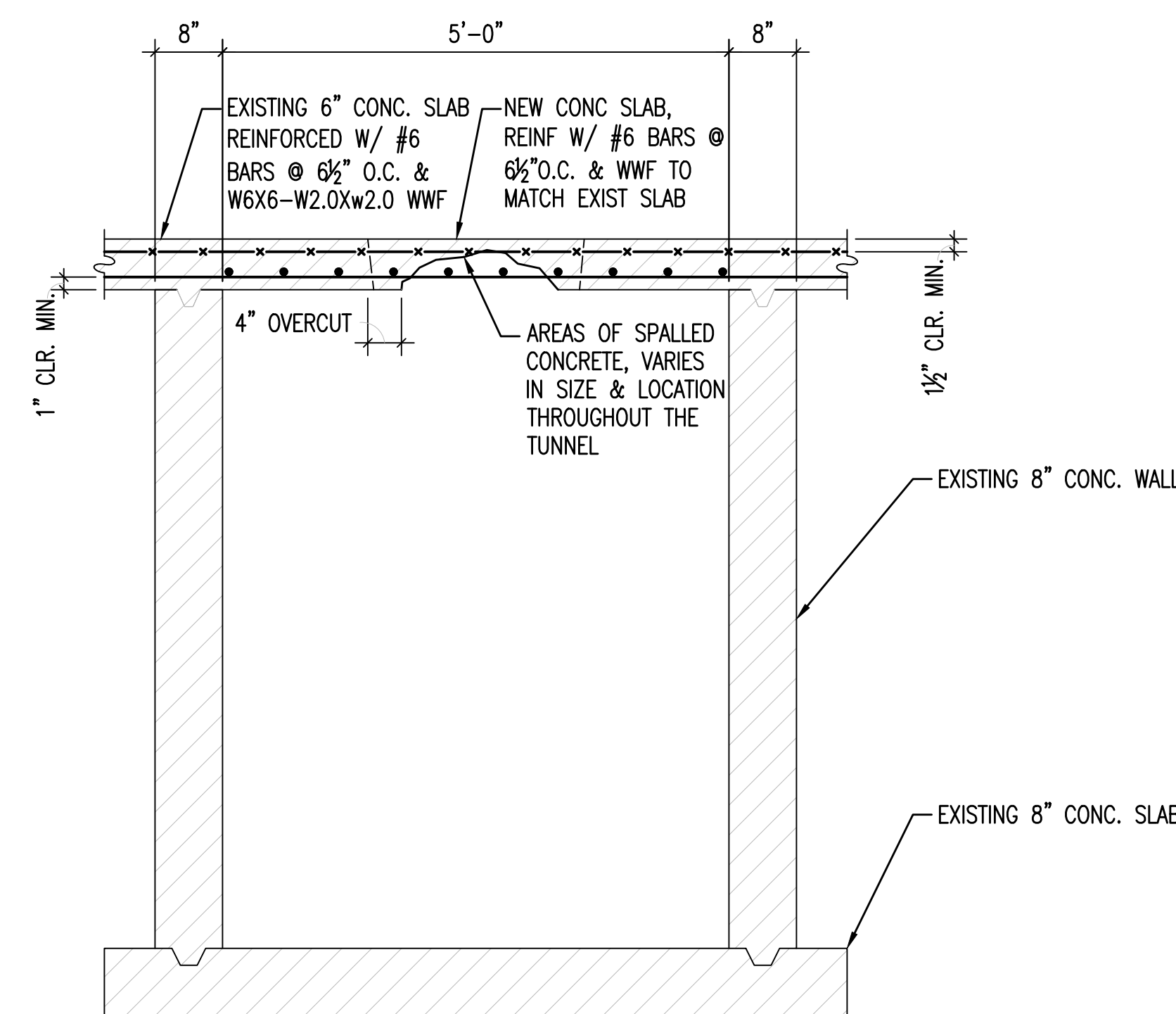


**2 TUNNEL ROOF PLAN**  
1/8"=1'-0" NORTH



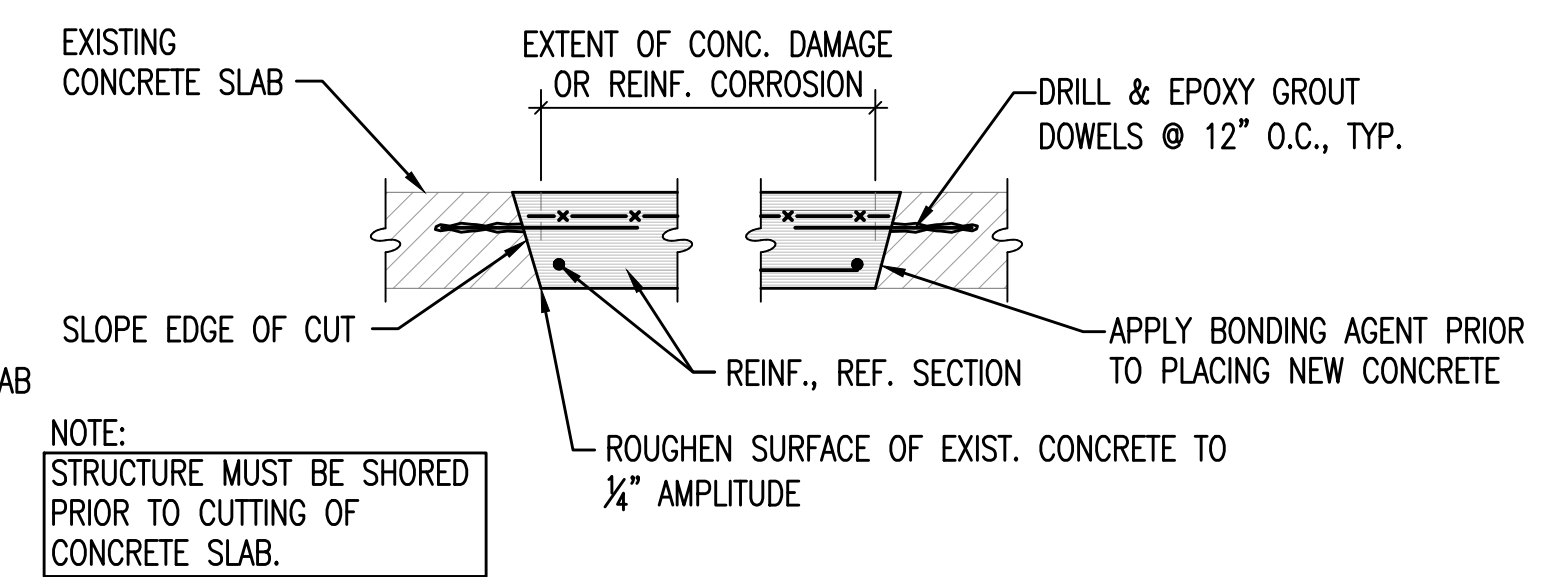
**3 TUNNEL SECTION - REPAIR DETAIL**  
3/4"=1'-0"

- SEQUENCING:**
1. REMOVE SPALLED CONCRETE FROM AREAS OF CONCERN.
  2. CUT AWAY CONCRETE AROUND SPALLED AREAS UNTIL RUST FREE REBAR IS EXPOSED. OVER CUT 4" EACH DIRECTION AS INDICATED BELOW.
  3. REMOVE ALL RUST FROM REBAR. DO NOT USE SOLVENTS TO CLEAN REBAR AS THEY CAN PENETRATE THE CONCRETE. IF SECTION LOSS GREATER THAN 15% HAS OCCURRED BARS, REPLACE IN KIND AND SPLICE TO EXISTING. (ORIGINAL #6 BARS WITH DIAMETERS MEASURING EQUAL TO OR LESS THAN 3/8" DIAMETER WILL NEED TO BE REPLACED)
  4. APPLY SPECIALTY COATING WITH ANTI-CORROSIVE AGENTS TO REBAR TO PREVENT FURTHER DAMAGE.
  5. ALLOW COATING TO SET. APPLY REPAIR GROUT SO REBAR IS NO LONGER EXPOSED TO THE ELEMENTS. ENSURE MINIMUM COVER IS MAINTAINED.
- NEW CONCRETE**
- AREA OF CONC. DAMAGE OR REINF. CORROSION
  - 4" MIN. OVER CUT
  - BONDING AGENT BETWEEN NEW & EXIST. CONCRETE
  - EXIST. REINF. TO REMAIN
  - UNDERCUT CORRODED REINF. TO PROVIDE 1" CLEAR, MIN.
- NOTE:**  
STRUCTURE MUST BE SHORED PRIOR TO CUTTING OF CONCRETE SLAB.
- ALL EXPOSED STEEL AND CONCRETE SURFACES SHALL BE CLEANED TO REMOVE CORROSION AND BOND-INHIBITING MATERIALS. DECAYED REINF. SHALL BE REMOVED AND NEW REINF. SHALL BE SPLICED TO EXIST.**



**4 TUNNEL SECTION - INFILL DETAIL**  
3/4"=1'-0"

- SEQUENCING:**
1. IF SPALLED CONCRETE DEPTH IS GREATER THAN 2 1/2" DEEP, SAW CUT FULL DEPTH OF CONCRETE SLAB IMMEDIATELY SURROUNDING AREAS OF CONCERN. OVER CUT 4" EACH DIRECTION FROM EXTENT OF DAMAGED AREA.
  2. INSTALL NEW REINFORCING AND DOWEL INTO EXISTING SLAB. USE 1"-2" REBAR DOWELS SPACED AT 12" ON CENTER WITH A MINIMUM EMBEDMENT OF 6" INTO EXISTING SLAB.
  3. PLACE WELDED WIRE REINFORCING AND FORMWORK.
  4. POUR BACK NEW CONCRETE SLAB.



**D. Terms and Conditions**

## I. Terms and Conditions

- a. **Acceptance or rejection:** PSU reserves the right to accept or reject any or all bids or part of a bid; to waive any informalities or technicalities; clarify any ambiguities in bids; and unless otherwise specified, to accept any item in the bid.
- b. The provisions found in Contractual Provisions Attachment (DA 146a) are incorporated by reference and made a part of this contract.
- c. In the event of a conflict in terms of language among the documents, the following order of precedence shall govern:
- \* Form DA 146a;
  - \* written modifications to the executed contract;
  - \* written contract signed by the parties;
  - \* the Bid Event documents, including any and all amendments; and
  - \* Contractor's written offer submitted in response to the Bid Event as finalized.
- d. Each and every provision of law and clause required by law to be inserted in the contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then on the application of either party the contract shall be amended to make such insertion or correction.
- e. This contract shall be governed by the laws of the State of Kansas and shall be deemed executed in Pittsburg, Crawford County, Kansas.
- f. The parties shall bring any and all legal proceedings arising hereunder in the State of Kansas, District Court of Crawford County, unless otherwise specified and agreed upon by PSU. The United States District Court for the State of Kansas sitting in Topeka, Shawnee County, Kansas, shall be the venue for any federal action or proceeding arising hereunder in which the State is a party.
- g. **Termination for Cause**  
The PSU Director of Purchasing may terminate this contract, or any part of this contract, for cause under any one of the following circumstances:
- \* the Contractor fails to make delivery of goods or services as specified in this contract;
  - \* the Contractor provides substandard quality or workmanship;
  - \* the Contractor fails to perform any of the provisions of this contract, or
  - \* the Contractor fails to make progress as to endanger performance of this contract in accordance with its terms.

The PSU Director of Purchasing shall provide Contractor with written notice of the conditions endangering performance. If the Contractor fails to remedy the conditions within ten (10) days from the receipt of the notice (or such longer period as PSU may authorize in writing), the PSU Director of Purchasing shall issue the Contractor an order to stop work immediately. Receipt of the notice shall be presumed to have occurred within three (3) days of the date of the notice.

h. The PSU Director of Purchasing may terminate performance of work under this contract in whole or in part whenever, for any reason, the PSU Director of Purchasing shall determine that the termination is in the best interest of PSU. In the event that the PSU Director of Purchasing elects to terminate this contract pursuant to this provision, it shall provide the Contractor written notice at least 30 days prior to the termination date. The termination shall be effective as of the date specified in the notice. The Contractor shall continue to perform any part of the work that may have not been terminated by the notice.

i. Hold Harmless - The Contractor shall indemnify PSU against any and all loss or damage to the extent arising out of the Contractor's negligence in the performance of services under this contract and for infringement of any copyright or patent occurring in connection with or in any way incidental to or arising out of the occupancy, use, service, operations or performance of work under this contract.

PSU shall not be precluded from receiving the benefits of any insurance the Contractor may carry which provides for indemnification for any loss or damage to property in the Contractor's custody and control, where such loss or destruction is to state property. The Contractor shall do nothing to prejudice PSU's right to recover against third parties for any loss, destruction or damage to PSU property.

j. Force Majeure - The Contractor shall not be held liable if the failure to perform under this contract arises out of causes beyond the control of the Contractor. Causes may include, but are not limited to, acts of nature, fires, tornadoes, quarantine, strikes other than by Contractor's employees, and freight embargoes.

k. The Contractor shall not assign, convey, encumber, or otherwise transfer its rights or duties under this contract without the prior written consent of PSU. PSU may reasonably withhold consent for any reason. This contract may terminate for cause in the event of its assignment, conveyance, encumbrance or other transfer by the Contractor without the prior written consent of PSU.

l. The Contractor shall be the sole source of contact for the contract. PSU will not subcontract any work under the contract to any other firm and will not deal with any subcontractors. The Contractor is totally responsible for all actions and work performed by its subcontractors. All terms, conditions and requirements of the contract shall apply without qualification to any services performed or goods provided by any subcontractor.

m. Both parties, in the performance of this contract, shall be acting in their individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be construed to be the employees or agents of the other party for any purpose whatsoever. The Contractor accepts full responsibility for payment of unemployment insurance, workers compensation, social security, income tax deductions and any other taxes or payroll deductions required by law for its employees engaged in work authorized by this contract.

n. Upon request, the Contractor shall present an affidavit of Worker's Compensation, Public Liability, and Property Damage Insurance to Procurement and Contracts.

o. The Contractor agrees to abide by all federal, state and local laws, and rules and regulations prohibiting discrimination in employment and controlling workplace safety. Any violations of applicable laws or rules or regulations may result in termination of this contract.



- p. The Contractor shall abide by all federal, state and local laws, and rules and regulations regarding the protection of the environment. The Contractor shall report any violations to the applicable governmental agency. A violation of applicable laws or rule or regulations may result in termination of this contract for cause.
- r. The Contractor shall be responsible for the proper care and custody of any state owned personal tangible property and real property furnished for Contractor's use in connection with the performance of this contract. The Contractor shall reimburse the PSU for such property's loss or damage caused by the Contractor, except for normal wear and tear.
- s. Failure to adequately inspect the premises shall not relieve the Contractor from furnishing without additional cost to PSU any materials, equipment, supplies or labor that may be required to carry out the intent of this Contract.
- t. Price Adjustments - Prices shall remain firm for the entire contract period. Prices shall be net delivered, including all trade, quantity and cash discounts. Any price reductions available during the contract period shall be offered to PSU. Failure to provide available price reductions may result in termination of the contract for cause.
- u. Payment - Payment Terms are Net 30 days. Payment date and receipt of order date shall be based upon K.S.A. 75-6403(b).
- v. Materials and Workmanship - The Contractor shall perform all work and furnish all supplies and materials, machinery, equipment, facilities, and means, necessary to complete all the work required by this Contract, within the time specified, in accordance with the provisions as specified. The Contractor shall be responsible for all work put in under these specifications and shall make good, repair and/or replace, at the Contractor's own expense, as may be necessary, any defective work, material, etc., if in the opinion of agency and/or Procurement and Contracts said issue is due to imperfection in material, design, workmanship or Contractor fault.
- w. New Materials, Supplies or Equipment - Unless otherwise specified, all materials, supplies or equipment offered by the Contractor shall be new, unused in any regard and of most current design. All materials, supplies and equipment shall be first class in all respects. Seconds or flawed items will not be acceptable. All materials, supplies or equipment shall be suitable for their intended purpose and, unless otherwise specified, fully assembled and ready for use on delivery
- x. Inspection - PSU reserves the right to reject, on arrival at destination, any items which do not conform with specification of the Contract.
- y. Modification - This contract shall be modified only by the written agreement and approval of the parties. No alteration or variation of the terms and conditions of the contract shall be valid unless made in writing and signed by the parties. Every amendment shall specify the date on which its provisions shall be effective.