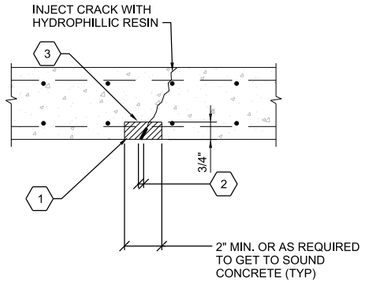
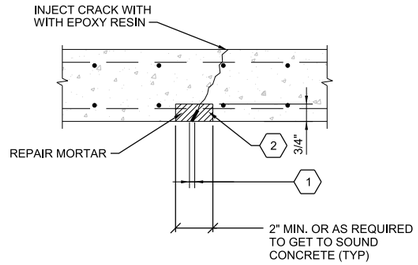


NON STRUCTURAL CRACK REPAIR

1. FOR CRACKS LESS THAN 1/8-INCH, BOND BREAKER AND JOINT SEALANT NOT REQUIRED.
2. FOR CRACKS WIDER THAN 1/8-INCH, CUT CONCRETE AS SHOWN AND INSTALL BOND BREAKER AND JOINT SEALANT.
3. WHERE EXISTING REINFORCING BARS ARE EXPOSED, REPAIR AS PER REPAIR DETAIL 3.

LOCATION	QUANTITY LF
WASTE SLUDGE HOLDING TANK	150
THICKENED SLUDGE HOLDING TANKS	225

1 DETAIL
NTS
S-001

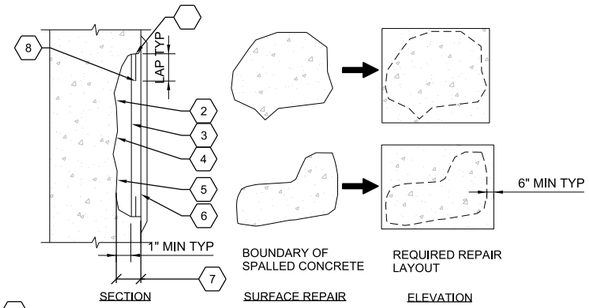


STRUCTURAL CRACK REPAIR

1. FOR CRACKS WIDER 1/8" CUT CONCRETE AS SHOWN AND PATCH AS PER REPAIR DETAIL 3.
2. WHERE EXISTING REINFORCING BARS ARE EXPOSED. REPAIR AS PER REPAIR DETAIL 3.

LOCATION	QUANTITY LF
WASTE SLUDGE HOLDING TANK	75
THICKENED SLUDGE HOLDING TANKS	125

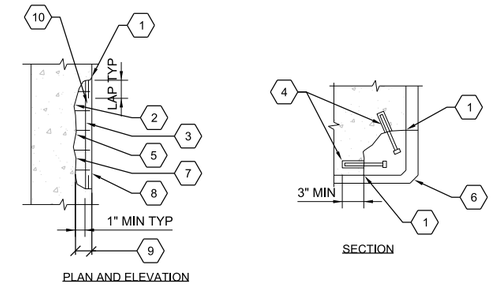
2 DETAIL
NTS
S-001



1. DO NOT CUT REINFORCING UNLESS IT IS APPROVED BY ENGINEER TO REMOVE ALL DETERIORATED CONCRETE.
2. REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. CHIP CONCRETE SUBTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE
3. WHERE REINFORCING STEEL WITH ACTIVE CORROSION IS ENCOUNTERED, ENGINEER TO REVIEW CONDITION OF CORRODED REBARS PRIOR TO REPAIR. REPLACEMENT IS REQUIRED WHERE LOSS ON REBAR CROSS SECTION IS OVER 25% AFTER REMOVAL WHERE REINFORCING REMAINS. CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST. REMOVE CONCRETE TO A DEPTH OF 1-INCH MINIMUM BEHIND REINFORCING BARS AS SHOWN. REPLACEMENT OF CORRODED REBARS SHALL BE INCIDENTAL AND INCLUDED IN REPAIR.
4. SURFACE SHALL BE DAMP BUT FREE OF STANDING WATER.
5. INSTALL NEW CONCRETE REPAIR MATERIALS PER SPECIFICATION SECTION 03 01 32 REPAIR OF VERTICAL AND OVERHEAD CONCRETE SURFACES.
6. REFER TO GENERAL NOTES FOR ADDITIONAL EXISTING CONCRETE NOTES, SPECIFIED PRODUCTS AND REQUIREMENTS FOR COORDINATION OF WORK.
7. FOR BID PURPOSES, ASSUME TOTAL DEPTH OF REPAIR IS 4-INCHES.
8. CUT EXISTING CORRODED REINFORCING BAR AS REQUIRED AND LAP NEW REBAR OF THE SAME SIZE.

LOCATION	QUANTITY SF
WASTE SLUDGE HOLDING TANK	350
THICKENED SLUDGE HOLDING TANKS	350

3 DETAIL
NTS
S-001

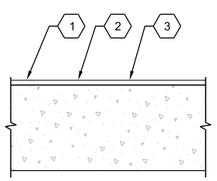


CONCRETE CORNER REPAIR

1. SCORE-CUT PERIMETER OF REPAIR AREA AS GENERALLY SHOWN. DO NOT CUT REINFORCING UNLESS APPROVED BY THE ENGINEER AS NECESSARY TO REMOVE ALL DETERIORATED CONCRETE.
2. REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. CHIP CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE.
3. WHERE REINFORCING STEEL WITH ACTIVE CORROSION IS ENCOUNTERED, ENGINEER TO REVIEW CONDITION OF CORRODED REBARS PRIOR TO REPAIR. REPLACEMENT IS REQUIRED WHERE LOSS ON REBAR CROSS SECTION IS OVER 25%. AFTER REMOVAL WHERE REINFORCING REMAINS, CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST. REMOVE CONCRETE TO A DEPTH OF 1-INCH MINIMUM BEHIND REINFORCING BAR AS SHOWN. REPLACEMENT OF CORRODED REBARS SHALL BE INCIDENTAL AND INCLUDED IN REPAIR.
4. 1/4-INCH DIAMETER STAINLESS STEEL PINS AT 12" SPACING STAGGERED, WITH MINIMUM EMBEDMENT MATERIALS AS SPECIFIED FOR ADHESIVE MATERIALS.
5. SURFACE SHALL BE DAMP BUT FREE OF STANDING WATER.
6. FORMED SURFACE WITH CHAMFER TO MATCH EXISTING CONCRETE SURFACE.
7. INSTALL NEW CONCRETE REPAIR MATERIALS PER SPECIFICATION SECTION 03 01 32 REPAIR OF VERTICAL AND OVERHEAD CONCRETE SURFACES.
8. REFER TO THE GENERAL NOTES FOR ADDITIONAL EXISTING CONCRETE NOTES, SPECIFIED PRODUCTS AND REQUIREMENTS FOR COORDINATION OF WORK.
9. FOR BID PURPOSES, ASSUME TOTAL DEPTH OF REPAIR IS 4-INCHES.
10. CUT EXISTING CORRODED REINFORCING BAR AS REQUIRED AND LAP WITH NEW REBAR SAME SIZE.

LOCATION	QUANTITY SF
WASTE SLUDGE HOLDING TANK	45
THICKENED SLUDGE HOLDING TANKS	45

4 DETAIL
NTS
S-001

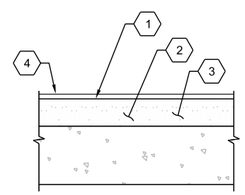


HORIZONTAL SURFACE REPAIR WITH PROTECTIVE COATING

1. REMOVE ALL SEDIMENTATION, LAITANCE, OIL, DIRT, OTHER SURFACE CONTAMINATION AND REPAIR ALL CONCRETE SURFACES AS PER TYPES 1, 2, 3, & 4.
2. HIGH-PRESSURE WATERBLAST ALL EXISTING CONCRETE SURFACES IN ACCORDANCE WITH SSPC-SP13 TO ACHIEVE A SURFACE PROFILE OF AN ICRI CSP5.
3. APPLY TNEMEC SERIES 218 UP TO 1/4" THICK FOLLOWED BY THE PROTECTIVE COATING PER SPECIFICATION 09 90 00 SYSTEM 19.

5 DETAIL
NTS
S-001

LOCATION	QUANTITY SF
WASTE SLUDGE HOLDING TANK	1,500
THICKENED SLUDGE HOLDING TANK	1,500

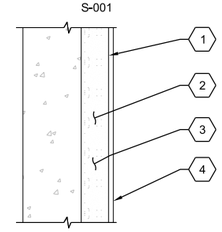


HORIZONTAL SURFACE REPAIR WITH PROTECTIVE COATING

1. REMOVE ALL SEDIMENTATION, LAITANCE, OIL, DIRT, OTHER SURFACE CONTAMINATION AND REPAIR ALL CONCRETE SURFACES AS PER TYPES 1, 2, 3, & 4.
2. HIGH-PRESSURE WATERBLAST ALL EXISTING CONCRETE SURFACES TO REMOVE AN AVERAGE OF 1" OF CONCRETE FROM ALL HORIZONTAL SURFACES. CONCRETE REPAIR PROCESS CAN BEGIN WHEN THE SURFACES IS PREPARED IN ACCORDANCE WITH SSPC-SP13 TO ACHIEVE A SURFACE PROFILE OF AN ICRI CSP5.
3. INSTALL NEW CONCRETE REPAIR MATERIALS PER SPECIFICATION SECTION 03 01 33 REPAIR OF HORIZONTAL AND OVERHEAD CONCRETE SURFACES. ASSUME REPAIR MORTAR THICKNESS OF 1 1/2" AVERAGE THROUGHOUT HORIZONTAL SURFACES IN THE TANK.
4. PROTECTIVE COATING PER SPECIFICATION 09 90 00 SYSTEM 19.

5A DETAIL
NTS
S-001

LOCATION	QUANTITY SF
WASTE SLUDGE HOLDING TANK	600
THICKENED SLUDGE HOLDING TANKS	600

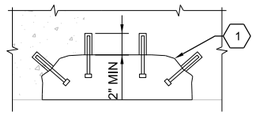


VERTICAL AND OVERHEAD SURFACE REPAIR WITH MORTAR AND PROTECTIVE COATING

1. REMOVE ALL SEDIMENTATION, LAITANCE, OIL, DIRT, OTHER SURFACE CONTAMINATION AND REPAIR ALL CONCRETE SURFACES AS PER TYPES 1, 2, 3, & 4.
2. HIGH-PRESSURE WATERBLAST ALL EXISTING CONCRETE SURFACES TO REMOVE AN AVERAGE OF 1" OF CONCRETE FROM ALL VERTICAL AND OVERHEAD SURFACES. CONCRETE REPAIR PROCESS CAN BEGIN WHEN THE SURFACES IS PREPARED IN ACCORDANCE WITH SSPC-SP13 TO ACHIEVE A SURFACE PROFILE OF AN ICRI CSP5.
3. INSTALL NEW CONCRETE REPAIR MATERIALS PER SPECIFICATION SECTION 03 01 32 REPAIR OF VERTICAL AND OVERHEAD CONCRETE SURFACES. ASSUME REPAIR MORTAR THICKNESS OF 1 1/2" AVERAGE THROUGHOUT VERTICAL AND OVERHEAD SURFACES IN THE TANK.
4. HIGH-PRESSURE WATERBLAST TO ACHIEVE THE RECOMMENDED SURFACE PROFILE. APPLY PROTECTIVE COATING PER SPECIFICATION 09 90 00 SYSTEM 19

6 DETAIL
NTS
S-001

LOCATION	QUANTITY SF
WASTE SLUDGE HOLDING TANK (VERTICAL)	4,500
THICKENED SLUDGE HOLDING TANK (VERTICAL)	4,500
WASTE SLUDGE HOLDING TANK (OVERHEAD)	2,250
THICKENED SLUDGE HOLDING TANK (OVERHEAD)	2,250



PLAN

ARCHITECTURAL CONCRETE SURFACE SPALL REPAIR

1. REMOVE ALL DETERIORATED CONCRETE TO SOUND CONCRETE. CHIP CONCRETE SUBSTRATE TO OBTAIN A SURFACE PROFILE OF 1/8-INCH IN DEPTH WITH A NEW FRACTURED AGGREGATE SURFACE.
2. 1/4-INCH DIAMETER STAINLESS STEEL PINS AT 3" SPACING STAGGERED, WITH MINIMUM EMBEDMENT MATERIALS AS SPECIFIED FOR ADHESIVE MATERIALS.
   THE PIN SHALL BE PERPENDICULAR TO SURFACE WITH MINIMUM 2" EDGE DISTANCE.
3. SOAK SURFACE FOR 24-HOURS PRIOR TO REPAIR.
4. INSTALL CONCRETE SPALL REPAIR MATERIALS PER THE MANUFACTURER'S REQUIREMENTS.
5. REFER TO THE GENERAL NOTES FOR ADDITIONAL EXISTING CONCRETE NOTES, SPECIFIED PRODUCTS AND REQUIREMENTS FOR COORDINATION OF WORK.

LOCATION	QUANTITY SF
GALLERY ROOF	25

7 DETAIL
NTS
S-001

STATE OF CONNECTICUT
LICENSED PROFESSIONAL ENGINEER
No. 30247
LIN ZHANG

NO.	DATE	REVISION	BY	APVD

DSGN AJ GILLUM | DR C O'REILLY | CHK L ZHANG | APVD L ZHANG

SLUDGE STORAGE TANKS REHABILITATION
NEW LONDON, CONNECTICUT
WASTE WATER TREATMENT PLANT
NEW LONDON, CONNECTICUT

STRUCTURAL
DETAILS

ch2m

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	NOVEMBER 2016
PROJ	668991
DWG	DL-001
SHEET	of

BID DOCUMENTS

REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL.
©CH2M HILL 2016. ALL RIGHTS RESERVED.