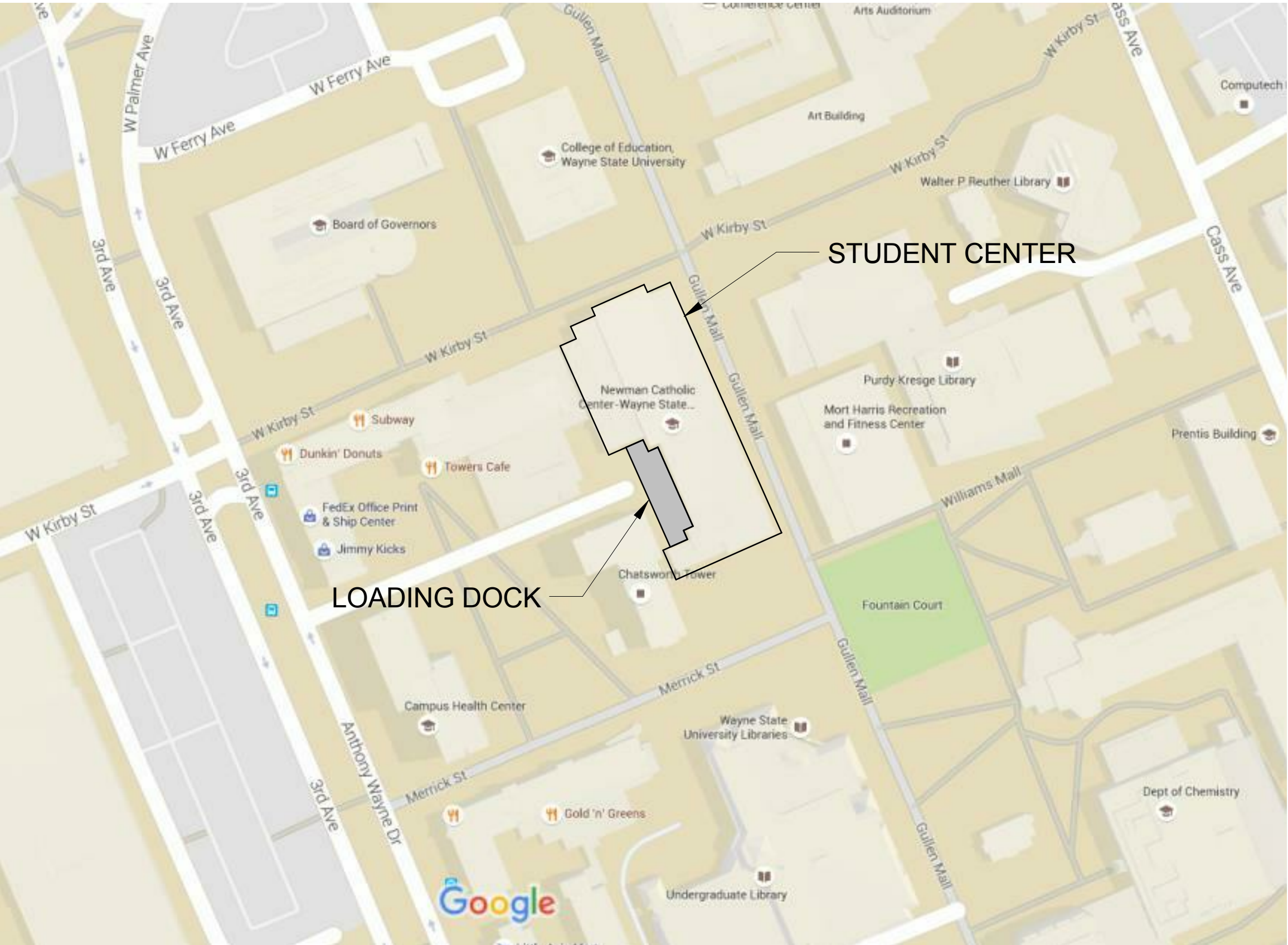


# WAYNE STATE UNIVERSITY STUDENT CENTER BUILDING LOADING DOCK LEAK REPAIRS

5221 GULLEN MALL DETROIT, MI  
WSU No. 034-282276

OWNER	WAYNE STATE UNIVERSITY 5454 CASS AVENUE DETROIT, MICHIGAN 48202
STRUCTURAL ENGINEER	DESAI NASR CONSULTING ENGINEERS 6765 DALY ROAD WEST BLOOMFIELD, MICHIGAN 48322
ARCHITECT	NEUMANN/SMITH ARCHITECTURE 400 GALLERIA OFFICENTRE, SUITE 555 SOUTHFIELD, MICHIGAN 48034

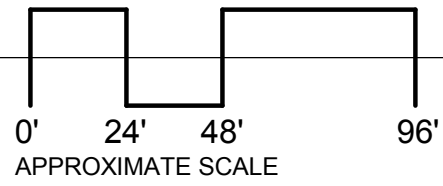
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Number	Sheet Name	Issue Date
S000	TITLE SHEET	08/01/2016
S001	GENERAL NOTES	08/01/2016
S002	SPECIAL INSPECTION REQUIREMENTS	08/01/2016
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S101-R	STRUCTURAL REPAIR PLAN	08/01/2016
S201	SECTIONS & DETAILS	08/01/2016
S202	REPAIR DETAILS	08/01/2016



LOCATION MAP



STAGING PLAN  
NOTE: DO NOT PLACE HOT-TANKS  
WITHIN 25 FEET OF ANY BUILDING.



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**WAYNE STATE UNIVERSITY**  
Student Center Loading  
Dock Leak Repairs  
Wayne State University  
5221 Gullen Mall  
Detroit, MI 48202  
WSU No. 034-282276

Seal	
Issue:	BID DOCUMENTS
Project number	7877-B00
Issue Date	08/01/2016
Drawn by	SRJ
Checked by	AN

TITLE SHEET

Sheet No.  
**S000**



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| A                    | <div><div>GENERAL NOTES</div><div><div>1.</div><div>THE GENERAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS AND THE GENERAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.</div></div><div><div>2.</div><div>TYPICAL DETAILS AND OTHER SECTIONS/DETAILS APPLY TO CONDITIONS THAT ARE SIMILAR TO THE CONDITIONS DESCRIBED IN THE SECTIONS/DETAILS, EVEN IF THEY ARE NOT SPECIFICALLY REFERENCED ON THE PLANS.</div></div><div><div>3.</div><div>THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS, METHODS SEQUENCES AND PROCEDURES OF CONSTRUCTION.</div></div><div><div>4.</div><div>CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF OSHA AND THE LOCAL GOVERNING CODES, CURRENT EDITION, AND ALL REQUIREMENTS SPECIFIED IN THE CODES SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT REQUIREMENTS SET FORTH ON THE DRAWING MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.</div></div><div><div>5.</div><div>GOVERNING BUILDING CODE – <b>MICHIGAN (INTERNATIONAL) BUILDING CODE 2012</b>. STANDARDS LISTED IN STRUCTURAL NOTE SECTIONS REFER TO THE VERSION AND EFFECTIVE DATE IDENTIFIED IN THE REFERENCED STANDARDS CHAPTER IN THE GOVERNING BUILDING CODE.</div></div><div><div>6.</div><div>WORK CONSTRUCTED PER THESE DRAWINGS SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY RETAINED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. SPECIAL INSPECTIONS REQUIRED BY THE GOVERNING BUILDING CODE, LOCAL BUILDING DEPARTMENT AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY A QUALIFIED SPECIAL INSPECTOR. PROJECT SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE OR REPLACE INSPECTION.</div></div><div><div>7.</div><div>DUE TO LIMITED LAY-DOWN AREA ON SITE, ALL DELIVERIES SHALL BE SCHEDULED AS "JUST-IN-TIME" TO AVOID CONGESTION ON SITE.</div></div><div><div>8.</div><div>LEAD PAINT: THIS BUILDING WAS CONSTRUCTED PRIOR TO 1978, THEREFORE THE CONTRACTOR SHALL ASSUME THAT ALL EXISTING PAINTED SURFACES MAY BE CONTAMINATED AND PLAN THEIR WORK ACCORDINGLY. INCLUDE WITHIN THE WORK ANY REMEDIATION EFFORTS, REMOVAL EFFORTS, ABATEMENT, TESTING, MONITORING, AND DISPOSAL REQUIRED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS - PERSONNEL MUST WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.</div></div><div><div>9.</div><div>SUBMIT SAFETY PLAN AND BURN PERMIT FOR WELDING AND OTHER HOT-WORK OPERATIONS PRIOR TO THE START OF WORK. THESE ITEMS MUST COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS AND BE APPROVED BY OWNER.</div></div><div><div>10.</div><div>WINTER CONDITIONS: PROVIDE ALL HEATING, SNOW REMOVAL, STORAGE AND PROTECTION OF MATERIALS REQUIRED TO MAINTAIN CONSTRUCTION OPERATIONS THROUGH THE WINTER IF NECESSARY.</div></div><div><div>11.</div><div>NOISE CONTROL: CONTRACTOR SHALL PREVENT EXCESSIVE NOISE DURING CONSTRUCTION. MEETING OWNER'S REQUIREMENTS. NO CONSTRUCTION NOISE SHALL BE PERMITTED BEFORE 9:00 AM OR AFTER 5:00 PM ON WEEKDAYS, OR ANY TIME ON WEEKENDS OR HOLIDAYS.</div></div></div> <td colspan="5"><div><div>SHORING AND BRACING</div><div><div>1.</div><div>CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING OF EXISTING CONSTRUCTION, NEW CONSTRUCTION AND UNDERGROUND UTILITIES AS FOLLOWS:<div><div>A.</div><div>WHERE SHOWN OR NOTED ON THE DRAWINGS.</div></div><div><div>B.</div><div>WHERE EXISTING CONSTRUCTION IS TO BE ALTERED OR DISTURBED UNTIL PERMANENT SUPPORT IS IN PLACE.</div></div><div><div>C.</div><div>WHERE EXISTING CONSTRUCTION IS NOT UNDERGOING ALTERATION AND IS TO REMAIN UNDISTURBED BUT IS DISTURBED AS A RESULT OF THE WORK OF THIS CONTRACT.</div></div><div><div>D.</div><div>AS REQUIRED FOR SAFE ERECTION, INSTALLATION OF NEW CONSTRUCTION, EQUIPMENT, ETC.</div></div><div><div>E.</div><div>WHEN NEEDED FOR CONTRACTOR'S "MEANS AND METHODS" OF CONSTRUCTION, AND OTHER SAFETY RELATED ISSUES.</div></div></div></div></div><div><div>2.</div><div>SHORING AND BRACING SHOWN ON THE DRAWINGS IS CONCEPTUAL. 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SOIL AND MATERIAL STRENGTHS SHALL BE VERIFIED BY TESTS, UNLESS CONSERVATIVE ESTIMATES THAT DO NOT AFFECT DEFLECTIONS AND DEFORMATIONS ARE APPROVED BY THE ARCHITECT/STRUCTURAL ENGINEER.</div></div><div><div>5.</div><div>CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS SEALED AND SIGNED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER SHOWING COMPLETE DESIGN INCLUDING TEMPORARY CONDITIONS, FINAL CONDITIONS AND SEQUENCE OF WORK.</div></div><div><div>6.</div><div>BEFORE STARTING WORK, CONTRACTOR SHALL PERFORM CONDITION SURVEY OF THE EXISTING BUILDING STRUCTURE, EXTERIOR FAÇADE AND INTERIOR FINISHES, INCLUDING PHOTOGRAPHIC DOCUMENTATION AND SUBMIT SURVEY TO THE OWNER FOR RECORD.</div></div><div><div>7.</div><div>DURING THE SHORING AND BRACING OPERATIONS, CONTRACTOR SHALL:<div><div>A.</div><div>KEEP THE EXISTING AND NEW CONSTRUCTION IN A SAFE CONDITION.</div></div><div><div>B.</div><div>MONITOR EXISTING AND NEW CONSTRUCTION TO DETECT ANY SIGNS OF DISTRESS OR DEFORMATION.</div></div><div><div>C.</div><div>TAKE IMMEDIATE STEPS TO PREVENT DISTRESS, DEFORMATION OR DAMAGE.</div></div></div></div><div><div>8.</div><div>CONTRACTOR SHALL CONTINUOUSLY MONITOR THE SHORING AND BRACING SYSTEM. CONTRACTOR SHALL REVIEW AND ASCERTAIN THAT ALL FIELD CONNECTIONS ARE COMPLETED ACCORDING TO THE CONTRACTOR'S DESIGN AND ISSUE APPROVAL FOR INSPECTION OF THE WORK BY THE TESTING AGENCY.</div></div><div><div>9.</div><div>AFTER COMPLETION OF SHORING AND BRACING AND COMPLETION OF WORK REQUIRING SHORING AND BRACING, CONTRACTOR SHALL REPORT TO THE SHORING AND BRACING ENGINEER AND NEW CONSTRUCTION, WITHOUT ANY COST TO THE OWNER, AND TO THE SATISFACTION OF THE OWNER AND ARCHITECT/STRUCTURAL ENGINEER.</div></div><td colspan="5"><div><div>CAST-IN-PLACE CONCRETE:</div><div><div>1.</div><div>CONCRETE STRUCTURAL FRAMING HAS BEEN DESIGNED BY THE ULTIMATE STRENGTH METHOD PER ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".</div></div><div><div>2.</div><div>CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE OF BUILDINGS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" EXCEPT AS MODIFIED BY STRUCTURAL REQUIREMENTS NOTED ON THE DRAWINGS.</div></div><div><div>3.</div><div>CEMENT SHALL CONFORM TO ASTM C150 "SPECIFICATION FOR PORTLAND CEMENT" TYPE I OR III.</div></div><div><div>4.</div><div>CONCRETE AGGREGATES SHALL CONFORM TO ASTM C33 "SPECIFICATION FOR CONCRETE AGGREGATES".</div></div><div><div>5.</div><div>REINFORCING SHALL CONFORM TO ASTM A-615 GRADE 60.</div></div><div><div>6.</div><div>REINFORCEMENT SHALL BE FABRICATED AND ERECTED ACCORDING TO THE ACI STANDARDS: "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI 315 - AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES", ACI 318R.</div></div><div><div>7.</div><div>WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS (ROLLS NOT PERMITTED) AND SHALL CONFORM TO ASTM A-185 AND HAVE A MINIMUM SIDE AND END LAP OF 8 INCHES.</div></div><div><div>8.</div><div>WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED. WELDING WHERE DETAILED SHALL CONFORM TO AWS D1.4 SPECIFICATION.</div></div><div><div>9.</div><div>CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS:<div><div>A.</div><div>SLAB-ON-GRADE: 4000 PSI</div></div><div><div>B.</div><div>SUPPORTED SLABS: 4000 PSI</div></div></div></div><div><div>10.</div><div>EXTERIOR CONCRETE, AND INTERIOR CONCRETE SUBJECTED TO FREEZE/THAW CYCLES, SALT, ETC., INCLUDING WALLS, SHALL BE AIR- ENTRAINED 6% +/- 1%.</div></div><div><div>11.</div><div>CONCRETE SHALL BE NORMAL WEIGHT, UNLESS INDICATED OTHERWISE.</div></div><div><div>12.</div><div>CONTRACTOR SHALL SUBMIT THE CONCRETE MIX DESIGNS FOR REVIEW BY THE STRUCTURAL ENGINEER. PROPORTION MIX DESIGNS AND PROVIDE PROOF OF MIX DESIGN STRENGTH AS DEFINED IN ACI 301. THE SUBMITTAL SHALL INCLUDE CEMENT TYPE AND SOURCE, CEMENT CUBE STRENGTH, AGGREGATE GRADATIONS, WATER TESTS, ADMIXTURE CATALOG INFORMATION AND CYLINDER STRENGTH TEST RESULTS FROM 30 TESTS, ON SPECIMENS WITH IDENTICAL MIX DESIGN, FOR EACH CONCRETE MIX, OR OTHER PROOF OF STRENGTH PER ACI 301.</div></div><div><div>13.</div><div>USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.</div></div><div><div>14.</div><div>SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN BY THE TESTING AGENCY NOT LESS THAN ONCE PER DAY, NOR LESS THAN ONCE FOR EACH 100 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 50 CUBIC YARDS OF 6000 PSI AND HIGHER CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. SAMPLE CONCRETE IN ACCORDANCE WITH ASTM C172. PERFORM THE FOLLOWING TESTS IN ACCORDANCE WITH THE INDICATED STANDARD:<div><div>A.</div><div>SLUMP: ASTM C143</div></div><div><div>B.</div><div>AIR CONTENT: ASTM C173</div></div><div><div>C.</div><div>COMPRESSIVE STRENGTH: ASTM C39 *</div></div></div><div><div>* WITH 1 CYLINDER AT 7 DAYS, 2 CYLINDERS AT 28 DAYS, AND ONE SPECIMEN HELD IN RESERVE.</div></div></div><td colspan="5"><div><div>CAST-IN-PLACE CONCRETE (CONT):</div><div><div>17.</div><div>HOOKED BARS SHALL BE STANDARD 90
DEGREE HOOKS PER ACI UNLESS NOTED OTHERWISE ON THE DRAWINGS.</div></div><div><div>18.</div><div>MINIMUM LAP SPlice SHALL BE CLASS B PER ACI 318. LOCATION OF LAP SPICES SHALL BE AS STEEL SHOP DRAWINGS.</div></div><div><div>19.</div><div>APPROVED REBAR COUPLERS MAY BE USED TO AID PLACEMENT OF DOWELS THROUGH FORMS. MECHANICAL SPICES SHALL DEVELOP 125% OF THE TENSILE STRENGTH OF THE REBAR.</div></div><div><div>20.</div><div>REINFORCING STEEL SHALL NOT BE CUT, BENT OR STRAIGHTENED IN THE FIELD UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR AS INDICATED ON THE DRAWINGS.</div></div><div><div>21.</div><div>REINFORCING STEEL SHALL BE PLACED WITH MINIMUM CONCRETE COVER AND TOLERANCES AS PER REQUIREMENTS OF ACI 318.</div></div><div><div>22.</div><div>NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.</div></div><div><div>23.</div><div>CONTRACTOR SHALL OBTAIN APPROVAL PRIOR TO PLACING OPENINGS OR SLEEVES NOT SHOWN ON THE DRAWINGS, THROUGH ANY STRUCTURAL MEMBER.</div></div><div><div>24.</div><div>FOR CONTROL JOINTS IN SLABS AND WALLS, SPACE JOINTS AT MAXIMUM 15 FEET ON CENTER UNLESS OTHERWISE NOTED ON THE DRAWINGS.</div></div><div><div>25.</div><div>CONSTRUCTION JOINTS SHALL BE FURNISHED WITH A FULL LENGTH KEYWAY CENTERED ON MEMBERS, WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY SHALL BE 25% OF THE CROSS SECTION DIMENSION OF THE MEMBER AND MINIMUM 1-1/2 INCHES INTO THE FIRST POUR OF CONCRETE.</div></div><div><div>26.</div><div>PROVIDE WATERSTOPS IN CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE ELEMENTS THAT HAVE ONE SIDE EXPOSED TO THE WEATHER OR SOIL AND THE OTHER SIDE OCCURRING ADJACENT TO ENCLOSED SPACE. REFER TO DRAWINGS AND SPECIFICATIONS FOR OTHER WATERPROOFING AND DAMP PROOFING DETAILS.</div></div><div><div>27.</div><div>PROVIDE 3/4" X 3/4" CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE MEMBERS, UNLESS NOTED OTHERWISE.</div></div><div><div>28.</div><div>THE CONCRETE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POUR SEQUENCES AND CONSTRUCTION PROCEDURES FOR ALL CONCRETE WORK TO ACCOUNT FOR TEMPERATURE DIFFERENTIALS AND SHRINKAGE OCCURRING DURING THE CONSTRUCTION PHASE UNTIL THE BUILDING IS PERMANENTLY IN A MECHANICALLY CONTROLLED ENVIRONMENT.</div></div><div><div>29.</div><div>THE USE OF CHLORIDES SUCH AS DEICING SALTS IS PROHIBITED FOR MELTING ICE PRIOR TO PLACEMENT OF CONCRETE.</div></div><div><div>30.</div><div>CURING OF CONCRETE SURFACES SHALL CONFORM TO ACI 308.1 "STANDARD SPECIFICATION FOR CONCRETE CURING" AND ACI 308R "GUIDE TO CURING CONCRETE".</div></div><div><div>31.</div><div>JOINTS TO BE PREPARED AND FILLED WITH JOINT SEALANT SHALL INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION JOINTS, CONTROL JOINTS, ISOLATION JOINTS, AND ALL INTERFACE JOINTS BETWEEN SIMILAR AND DISSIMILAR MEMBERS. SPECIFIC LOCATIONS MAY BE INDICATED ON THE DRAWINGS, OR MAY BE REQUIRED BY APPROVED SHOP DRAWINGS, OR MAY OCCUR DUE TO THE CONSTRUCTION SEQUENCE SELECTED BY THE CONTRACTOR.</div></div><div><div>32.</div><div>PRIOR TO PLACING CONCRETE ADJACENT TO EXISTING CONCRETE, THOROUGHLY CLEAN, DE-GREASE AND MECHANICALLY ROUGHEN EXISTING CONCRETE SURFACES. APPLY BONDING AGENT PRIOR TO PLACING FRESH CONCRETE. BONDING AGENT SHALL BE "SIKA ARMATEC 110 EPOCHEM BY SIKA CORPORATION, OR APPROVED EQUAL. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR SURFACE PREPARATION, MIXING AND APPLICATION.</div></div><div><div>33.</div><div>NON-SHRINK GROUT: GROUT SHALL CONFORM TO ASTM C1107. GROUT SHALL BE PREMIXED, NON-SHRINK NON-CATALYZED NATURAL AGGREGATE GROUT WITH A MINIMUM SEVEN-DAY COMPRESSIVE STRENGTH OF 7,000 PSI PLASTIC, 6,000 PSI FLOWABLE, AND 5,000 PSI FLUID CONSISTENCY.</div></div><div><div>34.</div><div>REINFORCING STEEL, ANCHOR RODS AND EMBED PLACEMENT SHALL BE INSPECTED, PRIOR TO PLACEMENT OF CONCRETE, IN ACCORDANCE WITH ACI-318 AND CODE REQUIRED SPECIAL INSPECTION BY QUALIFIED INSPECTOR PRIOR. THESE INSPECTIONS ARE NOT INCLUDED IN THE BASIC SERVICES OF THE STRUCTURAL ENGINEER OF RECORD.</div></div></div><td colspan="5"><div><div>POST INSTALLED ANCHORS</div><div><div>1.</div><div>POST INSTALLED ANCHORS INCLUDE ALL MECHANICAL AND ADHESIVE ANCHORS NOTED ON CONSTRUCTION DOCUMENTS. ALL POST INSTALLED ANCHORS SHALL CONFORM TO AC-193 FOR MECHANICAL ANCHORS AND AC-308 FOR ADHESIVE ANCHORS.</div></div><div><div>2.</div><div>USE ONLY CODE APPROVED ANCHORS WITH VALID ICC-ESR EVALUATION REPORT FOR USE IN BASE MATERIAL SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMIT ICC-ESR EVALUATION REPORT TO STRUCTURAL ENGINEER AND SPECIAL INSPECTION AGENT FOR APPROVAL.</div></div><div><div>3.</div><div>INSTALLER OF POST INSTALLED ANCHORS SHALL BE TRAINED BY ANCHOR MANUFACTURER.</div></div><div><div>4.</div><div>CLEAN EXISTING CONCRETE SURFACE TO SOLID STRUCTURAL CONCRETE. GRIND SMOOTH FOR FULL STEEL CONTACT AND TO PREVENT GAPS BETWEEN STEEL AND CONCRETE. ALTERNATIVELY, PROVIDE NON-SHRINK GROUT IN ALL VOIDS BETWEEN STEEL AND BASE MATERIAL.</div></div><div><div>5.</div><div>DRILL SMALLER DIAMETER PILOT HOLE IN EXISTING CONCRETE AND CHECK FOR EXISTING REINFORCING. DO NOT CUT OR DAMAGE EXISTING REINFORCING.</div></div><div><div>6.</div><div>IF EXISTING REINFORCING IS FOUND, SHIFT HOLE TO AVOID EXISTING REINFORCING. SUBMIT LOCATION OF NEW HOLE TO STRUCTURAL ENGINEER FOR REVIEW.</div></div><div><div>7.</div><div>INSTALL MECHANICAL ANCHORS AND ADHESIVE ANCHORS IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS AND PROCEDURE DETAILED IN ICC-ESR EVALUATION REPORT.</div></div><div><div>8.</div><div>SPECIAL INSPECTIONS ARE REQUIRED FOR ALL MECHANICAL AND ADHESIVE ANCHORS. INSPECT AND TEST POST INSTALLED ANCHORS AS SPECIFIED IN ICC-ESR EVALUATION REPORT.</div></div><div><div>9.</div><div>THE FOLLOWING ANCHORS ARE APPROVED. SUBMITTALS FOR ALTERNATIVE EQUAL ANCHORS WILL BE REVIEWED BY STRUCTURAL ENGINEER AND APPROVED AT THEIR DISCRETION.</div></div></div><table><tr><th>ANCHOR TYPE:</th><th>APPROVED ANCHOR</th><th>ICC-ESR REPORT NO.</th><th>BASE MATERIAL</th></tr><tr><td>SCREW ANCHORS</td><td>HILTI KWIK HUS-EZ</td><td>ESR-3027</td><td>CONCRETE</td></tr><tr><td>STEEL DROP-IN ANCHOR</td><td>HILTI HDI/HD-L<br/>HILTI HDI-P</td><td>(N/A)<br/>(N/A)</td><td>CONCRETE<br/>PRECAST<br/>CONCRETE</td></tr><tr><td>EXPANSION ANCHORS</td><td>HILTI KWIK BOLT TZ<br/>HILTI KWIK BOLT 3</td><td>ESR-1917<br/>ESR-2302</td><td>CONCRETE<br/>CONCRETE<br/>(UN-CRACKED ONLY)</td></tr><tr><td>ADHESIVE ANCHORS</td><td>HILTI HIT-HY200 SAFESSET<br/>HILTI HIT-HY70 + HAS/REBAR<br/>HILTI HIT-HY70 + HAS/REBAR</td><td>ESR-3187<br/>ESR-3342<br/>ESR-2682</td><td>CONCRETE<br/>GROUTED<br/>MASONRY<br/>HOLLOW<br/>MASONRY</td></tr></table><div>(NOTE: REFER TO PLAN NOTES, DETAILS AND/OR SCHEDULES FOR THE DIAMETER OF ANCHOR ROD, OR SIZE OF REBAR USED, AND THE EMBED DEPTH REQUIRED FOR POST INSTALLED ANCHORS.)</div></td></td></div></td></td> |                                  |   |   |   | <div><div>SHORING AND BRACING</div><div><div>1.</div><div>CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING OF EXISTING CONSTRUCTION, NEW CONSTRUCTION AND UNDERGROUND UTILITIES AS FOLLOWS:<div><div>A.</div><div>WHERE SHOWN OR NOTED ON THE DRAWINGS.</div></div><div><div>B.</div><div>WHERE EXISTING CONSTRUCTION IS TO BE ALTERED OR DISTURBED UNTIL PERMANENT SUPPORT IS IN PLACE.</div></div><div><div>C.</div><div>WHERE EXISTING CONSTRUCTION IS NOT UNDERGOING ALTERATION AND IS TO REMAIN UNDISTURBED BUT IS DISTURBED AS A RESULT OF THE WORK OF THIS CONTRACT.</div></div><div><div>D.</div><div>AS REQUIRED FOR SAFE ERECTION, INSTALLATION OF NEW CONSTRUCTION, EQUIPMENT, ETC.</div></div><div><div>E.</div><div>WHEN NEEDED FOR CONTRACTOR'S "MEANS AND METHODS" OF CONSTRUCTION, AND OTHER SAFETY RELATED ISSUES.</div></div></div></div></div> <div><div>2.</div><div>SHORING AND BRACING SHOWN ON THE DRAWINGS IS CONCEPTUAL. 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<div><div>9.</div><div>AFTER COMPLETION OF SHORING AND BRACING AND COMPLETION OF WORK REQUIRING SHORING AND BRACING, CONTRACTOR SHALL REPORT TO THE SHORING AND BRACING ENGINEER AND NEW CONSTRUCTION, WITHOUT ANY COST TO THE OWNER, AND TO THE SATISFACTION OF THE OWNER AND ARCHITECT/STRUCTURAL ENGINEER.</div></div> <td colspan="5"><div><div>CAST-IN-PLACE CONCRETE:</div><div><div>1.</div><div>CONCRETE STRUCTURAL FRAMING HAS BEEN DESIGNED BY THE ULTIMATE STRENGTH METHOD PER ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".</div></div><div><div>2.</div><div>CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE OF BUILDINGS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" EXCEPT AS MODIFIED BY STRUCTURAL REQUIREMENTS NOTED ON THE DRAWINGS.</div></div><div><div>3.</div><div>CEMENT SHALL CONFORM TO ASTM C150 "SPECIFICATION FOR PORTLAND CEMENT" TYPE I OR III.</div></div><div><div>4.</div><div>CONCRETE AGGREGATES SHALL CONFORM TO ASTM C33 "SPECIFICATION FOR CONCRETE AGGREGATES".</div></div><div><div>5.</div><div>REINFORCING SHALL CONFORM TO ASTM A-615 GRADE 60.</div></div><div><div>6.</div><div>REINFORCEMENT SHALL BE FABRICATED AND ERECTED ACCORDING TO THE ACI STANDARDS: "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI 315 - AND "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES", ACI 318R.</div></div><div><div>7.</div><div>WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS (ROLLS NOT PERMITTED) AND SHALL CONFORM TO ASTM A-185 AND HAVE A MINIMUM SIDE AND END LAP OF 8 INCHES.</div></div><div><div>8.</div><div>WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS SPECIFICALLY DETAILED. 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LOCATION OF LAP SPICES SHALL BE AS STEEL SHOP DRAWINGS.</div></div><div><div>19.</div><div>APPROVED REBAR COUPLERS MAY BE USED TO AID PLACEMENT OF DOWELS THROUGH FORMS. MECHANICAL SPICES SHALL DEVELOP 125% OF THE TENSILE STRENGTH OF THE REBAR.</div></div><div><div>20.</div><div>REINFORCING STEEL SHALL NOT BE CUT, BENT OR STRAIGHTENED IN THE FIELD UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR AS INDICATED ON THE DRAWINGS.</div></div><div><div>21.</div><div>REINFORCING STEEL SHALL BE PLACED WITH MINIMUM CONCRETE COVER AND TOLERANCES AS PER REQUIREMENTS OF ACI 318.</div></div><div><div>22.</div><div>NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.</div></div><div><div>23.</div><div>CONTRACTOR SHALL OBTAIN APPROVAL PRIOR TO PLACING OPENINGS OR SLEEVES NOT SHOWN ON THE DRAWINGS, THROUGH ANY STRUCTURAL MEMBER.</div></div><div><div>24.</div><div>FOR CONTROL JOINTS IN SLABS AND WALLS, SPACE JOINTS AT MAXIMUM 15 FEET ON CENTER UNLESS OTHERWISE NOTED ON THE DRAWINGS.</div></div><div><div>25.</div><div>CONSTRUCTION JOINTS SHALL BE FURNISHED WITH A FULL LENGTH KEYWAY CENTERED ON MEMBERS, WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY SHALL BE 25% OF THE CROSS SECTION DIMENSION OF THE MEMBER AND MINIMUM 1-1/2 INCHES INTO THE FIRST POUR OF CONCRETE.</div></div><div><div>26.</div><div>PROVIDE WATERSTOPS IN CONSTRUCTION JOINTS IN CAST-IN-PLACE CONCRETE ELEMENTS THAT HAVE ONE SIDE EXPOSED TO THE WEATHER OR SOIL AND THE OTHER SIDE OCCURRING ADJACENT TO ENCLOSED SPACE. REFER TO DRAWINGS AND SPECIFICATIONS FOR OTHER WATERPROOFING AND DAMP PROOFING DETAILS.</div></div><div><div>27.</div><div>PROVIDE 3/4" X 3/4" CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE MEMBERS, UNLESS NOTED OTHERWISE.</div></div><div><div>28.</div><div>THE CONCRETE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POUR SEQUENCES AND CONSTRUCTION PROCEDURES FOR ALL CONCRETE WORK TO ACCOUNT FOR TEMPERATURE DIFFERENTIALS AND SHRINKAGE OCCURRING DURING THE CONSTRUCTION PHASE UNTIL THE BUILDING IS PERMANENTLY IN A MECHANICALLY CONTROLLED ENVIRONMENT.</div></div><div><div>29.</div><div>THE USE OF CHLORIDES SUCH AS DEICING SALTS IS PROHIBITED FOR MELTING ICE PRIOR TO PLACEMENT OF CONCRETE.</div></div><div><div>30.</div><div>CURING OF CONCRETE SURFACES SHALL CONFORM TO ACI 308.1 "STANDARD SPECIFICATION FOR CONCRETE CURING" AND ACI 308R "GUIDE TO CURING CONCRETE".</div></div><div><div>31.</div><div>JOINTS TO BE PREPARED AND FILLED WITH JOINT SEALANT SHALL INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION JOINTS, CONTROL JOINTS, ISOLATION JOINTS, AND ALL INTERFACE JOINTS BETWEEN SIMILAR AND DISSIMILAR MEMBERS. SPECIFIC LOCATIONS MAY BE INDICATED ON THE DRAWINGS, OR MAY BE REQUIRED BY APPROVED SHOP DRAWINGS, OR MAY OCCUR DUE TO THE CONSTRUCTION SEQUENCE SELECTED BY THE CONTRACTOR.</div></div><div><div>32.</div><div>PRIOR TO PLACING CONCRETE ADJACENT TO EXISTING CONCRETE, THOROUGHLY CLEAN, DE-GREASE AND MECHANICALLY ROUGHEN EXISTING CONCRETE SURFACES. APPLY BONDING AGENT PRIOR TO PLACING FRESH CONCRETE. BONDING AGENT SHALL BE "SIKA ARMATEC 110 EPOCHEM BY SIKA CORPORATION, OR APPROVED EQUAL. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR SURFACE PREPARATION, MIXING AND APPLICATION.</div></div><div><div>33.</div><div>NON-SHRINK GROUT: GROUT SHALL CONFORM TO ASTM C1107. GROUT SHALL BE PREMIXED, NON-SHRINK NON-CATALYZED NATURAL AGGREGATE GROUT WITH A MINIMUM SEVEN-DAY COMPRESSIVE STRENGTH OF 7,000 PSI PLASTIC, 6,000 PSI FLOWABLE, AND 5,000 PSI FLUID CONSISTENCY.</div></div><div><div>34.</div><div>REINFORCING STEEL, ANCHOR RODS AND EMBED PLACEMENT SHALL BE INSPECTED, PRIOR TO PLACEMENT OF CONCRETE, IN ACCORDANCE WITH ACI-318 AND CODE REQUIRED SPECIAL INSPECTION BY QUALIFIED INSPECTOR PRIOR. THESE INSPECTIONS ARE NOT INCLUDED IN THE BASIC SERVICES OF THE STRUCTURAL ENGINEER OF RECORD.</div></div></div> <td colspan="5"><div><div>POST INSTALLED ANCHORS</div><div><div>1.</div><div>POST INSTALLED ANCHORS INCLUDE ALL MECHANICAL AND ADHESIVE ANCHORS NOTED ON CONSTRUCTION DOCUMENTS. ALL POST INSTALLED ANCHORS SHALL CONFORM TO AC-193 FOR MECHANICAL ANCHORS AND AC-308 FOR ADHESIVE ANCHORS.</div></div><div><div>2.</div><div>USE ONLY CODE APPROVED ANCHORS WITH VALID ICC-ESR EVALUATION REPORT FOR USE IN BASE MATERIAL SHOWN ON THE CONSTRUCTION DOCUMENTS. 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| EXPANSION ANCHORS    | HILTI KWIK BOLT TZ<br>HILTI KWIK BOLT 3   
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Issue: BID DOCUMENTS	
Project number	7877-B00
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Drawn by	SRJ
Checked by	AN

GENERAL NOTES

Sheet No.

S001



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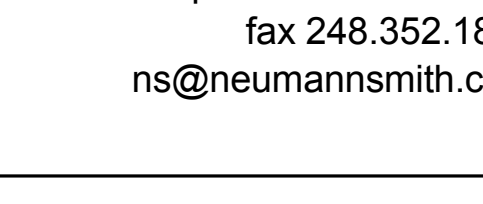


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Student Center Loading  
Dock Leak Repairs

Wayne State University

5221 Gullen Mall

Detroit, MI 48202

WSU No. 034-282276

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SPECIAL INSPECTION REQUIREMENTS - NOTES					
1.	SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE 2012 MICHIGAN (INTERNATIONAL) BUILDING CODE CHAPTER 17 AND AS MODIFIED HEREIN.				
2.	<div>DESIGNATIONS</div> <div>SI SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC., AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTOR MAY BE A FIRM WITH MULTIPLE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS.</div> <div>TA TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND ASSEMBLIES. TESTING AGENCY SHALL BE UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.</div> <div>GE GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT.</div> <div>SE SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUCH AS PRECAST CONCRETE, STEEL JOISTS, COLD FORMED FRAMING ASSEMBLIES, ETC. SPECIALTY ENGINEER SHALL PROVIDE OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIGN IN ADDITION TO THE SPECIAL INSPECTION</div>				
3.	TA, GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THE SI. THE SI SHALL COMPILE AND SUBMIT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS SHALL INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED ITEM COMPLIES WITH CONTRACT DOCUMENTS, REMEDIAL WORK PERFORMED, RETESTS.				
4.	SI SHALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CONTRACT DOCUMENTS FOUND ON THE SAME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD. FORMAL REPORTS OF COMPLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE AND SIGN FINAL REPORT WITH A SUMMARY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND BUILDING OFFICIAL.				
5.	SI, TA & GE SHALL BE PAID BY THE OWNER IN COMPLIANCE WITH THE MICHIGAN (INTERNATIONAL) BUILDING CODE.				

SPECIAL INSPECTION REQUIREMENTS - CONCRETE CONSTRUCTION					
TASK	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE	RESPONSIBLE AGENT
	CONTINUOUS	PERIODIC			
1. INSPECTION OF REINFORCING STEEL AND PLACEMENTS.	-	X	ACI 318: 3.5, 7.1-7.7	1910.4	SI
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B.	-	-	AWS D1.4 ACI 318: 3.5.2	-	SI
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE (POST-INSTALLED).	-	X	ACI 318: 3.8.6, 8.1.3, 21.2.8	1909.1	SI / TA
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: Ch. 4, 5.2-5.4	1904.2, 1910.2, 1910.3	SI / TA
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10	SI / TA
7. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8	SI
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 5.11-5.13	1910.9	SI
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH	-	X	ACI 318: 6.2	-	SI / SE / TA
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 6.1.1	-	SI / SE / TA

SPECIAL INSPECTION REQUIREMENTS - STRUCTURAL STEEL						
INSPECTION TASK		INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE	RESPONSIBLE AGENT
		CONTINUOUS	PERIODIC			
INSPECTION OF WELDING:						
1.	INSPECTION TASKS PRIOR TO WELDING:			AISC 360, SECTION N5	-	-
A.	WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	P	P			
B.	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	P	P			
C.	MATERIAL IDENTIFICATION (TYPE/GRADE).	O	O			
D.	WELDER IDENTIFICATION SYSTEM.	O	O			
E.	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): - JOINT PREPARATION: - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL). - CLEANLINESS (CONDITION OF STEEL SURFACES). - TACKING (TACK WELD QUALITY AND LOCATION). - BACKING TYPE AND FIT (IF AVAILABLE).	O	O			
F.	CONFIGURATION OF FINISH AND ACCESS HOLES.	O	O			
G.	FIT-UP OF FILLET WELDS: - DIMENSIONS (ALIGNMENT, GAPS AT ROOT). - CLEANLINESS (CONDITION OF STEEL SURFACES). - TACKING (TACK WELD QUALITY AND LOCATION).	O	O			
H.	CHECK WELDING EQUIPMENT.	O	-			
2.	INSPECTION TASKS DURING WELDING:			AISC 360, SECTION N5	-	-
A.	USE OF QUALIFIED WELDERS.	O	O			
B.	CONTROL AND HANDLING OF WELDING CONSUMABLES: - PACKAGING. - EXPOSURE CONTROL.	O	O			
C.	NO WELDING OVER CRACKED TACK WELDS.	O	O			
D.	WPS FOLLOWED: - SETTINGS ON WELDING EQUIPMENT. - TRAVEL SPEED. - SELECTED WELDING MATERIALS. - SHIELDING GAS TYPE/FLOW RATE. - PREHEAT APPLIED. - INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.). - PROPER POSITION (F, V, H, OH).	O	O			
E.	WELDING TECHNIQUES: - INTERPASS AND FINAL CLEANING. - EACH PASS WITHIN PROFILE LIMITATIONS. - EACH PASS MEETS QUALITY REQUIREMENTS.	O	O			
3.	INSPECTION TASKS AFTER WELDING:			AISC 360, SECTION N5	-	-
A.	WELDS CLEANED.	O	O			
B.	SIZE, LENGTH AND LOCATION OF WELDS.	P	P			
C.	WELDS MEET VISUAL ACCEPTANCE CRITERIA: - CRACK PROHIBITION. - WELD/BASE-METAL FUSION. - CRATER CROSS SECTION. - WELD PROFILES. - WELD SIZE. - UNDERCUT. - POROSITY.	P	P			
D.	ARC STRIKES.	P	P			
E.	K-AREA.	P	P			
F.	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED).	P	P			
G.	REPAIR ACTIVITY.	P	P			
H.	DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.	P	P			
O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P: PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.						



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Dock Leak Repairs

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Detroit, MI 48202

WSU No. 034-282276

Seal

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Project number 7877-B00

Issue Date 08/01/2016

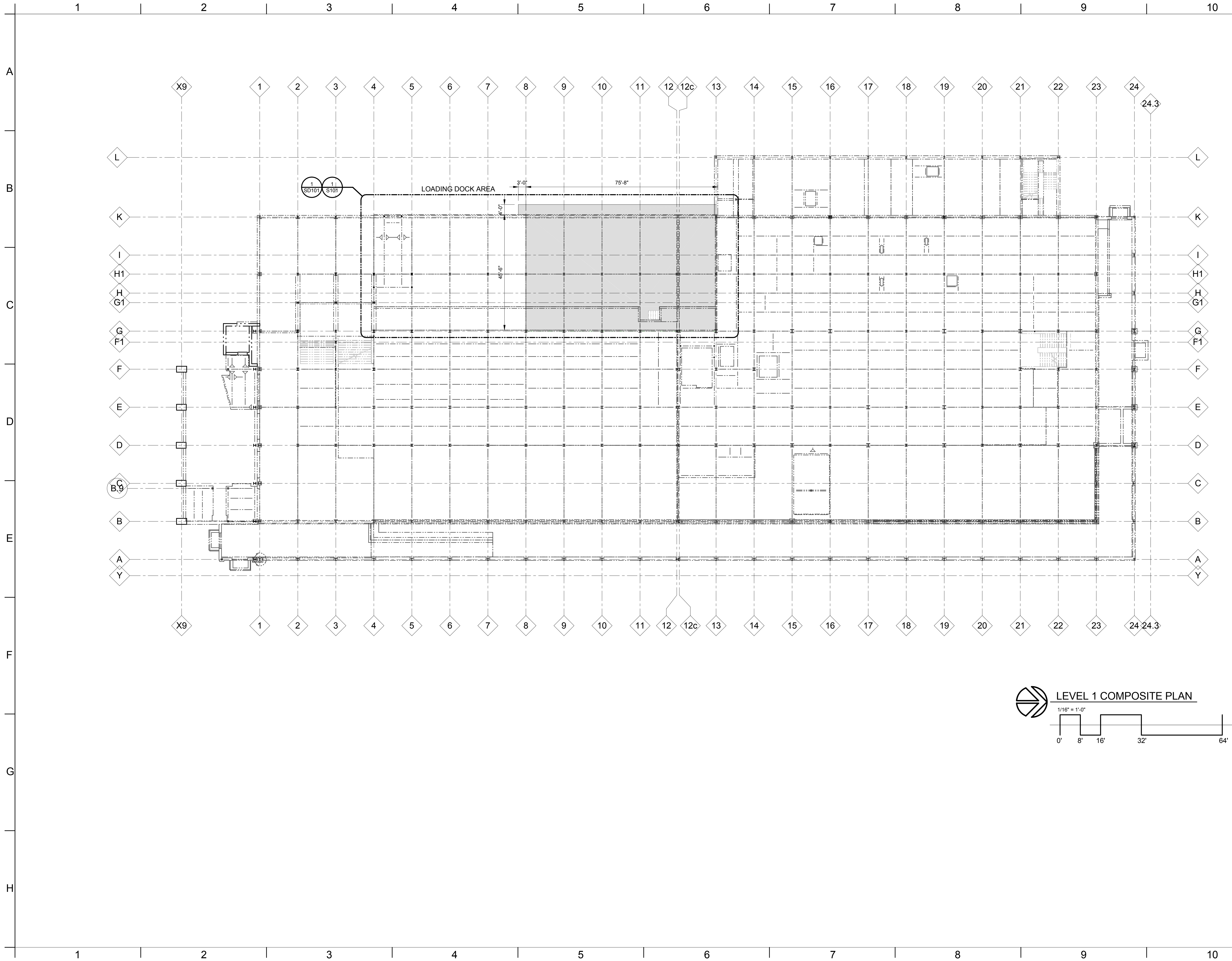
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SPECIAL  
INSPECTION  
REQUIREMENTS

Sheet No.

S002



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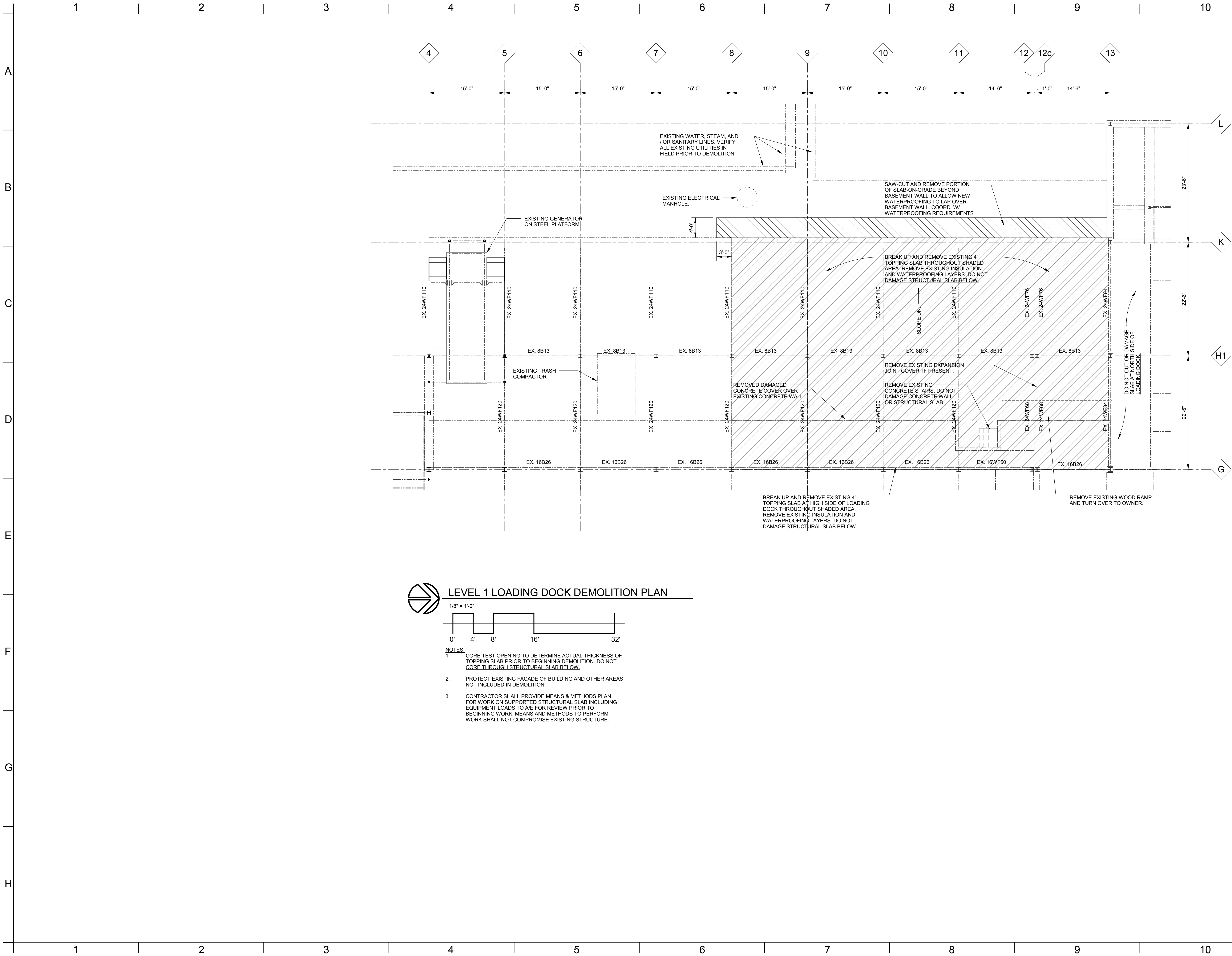
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Project number	7877-B00
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LEVEL 1 COMPOSITE  
PLAN

Sheet No.

S003





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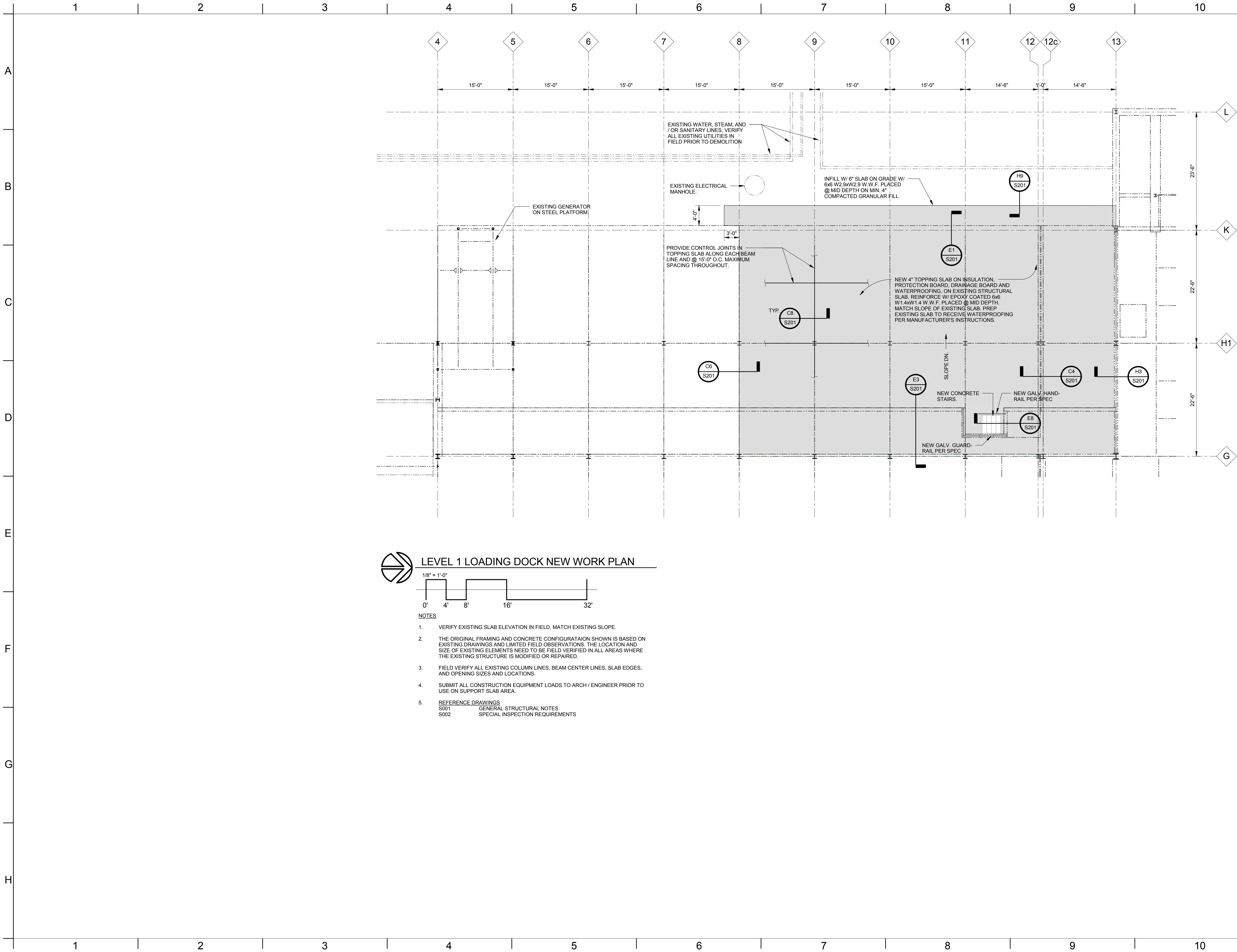
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LEVEL 1 DEMOLITION  
PLAN

Sheet No.  
SD101





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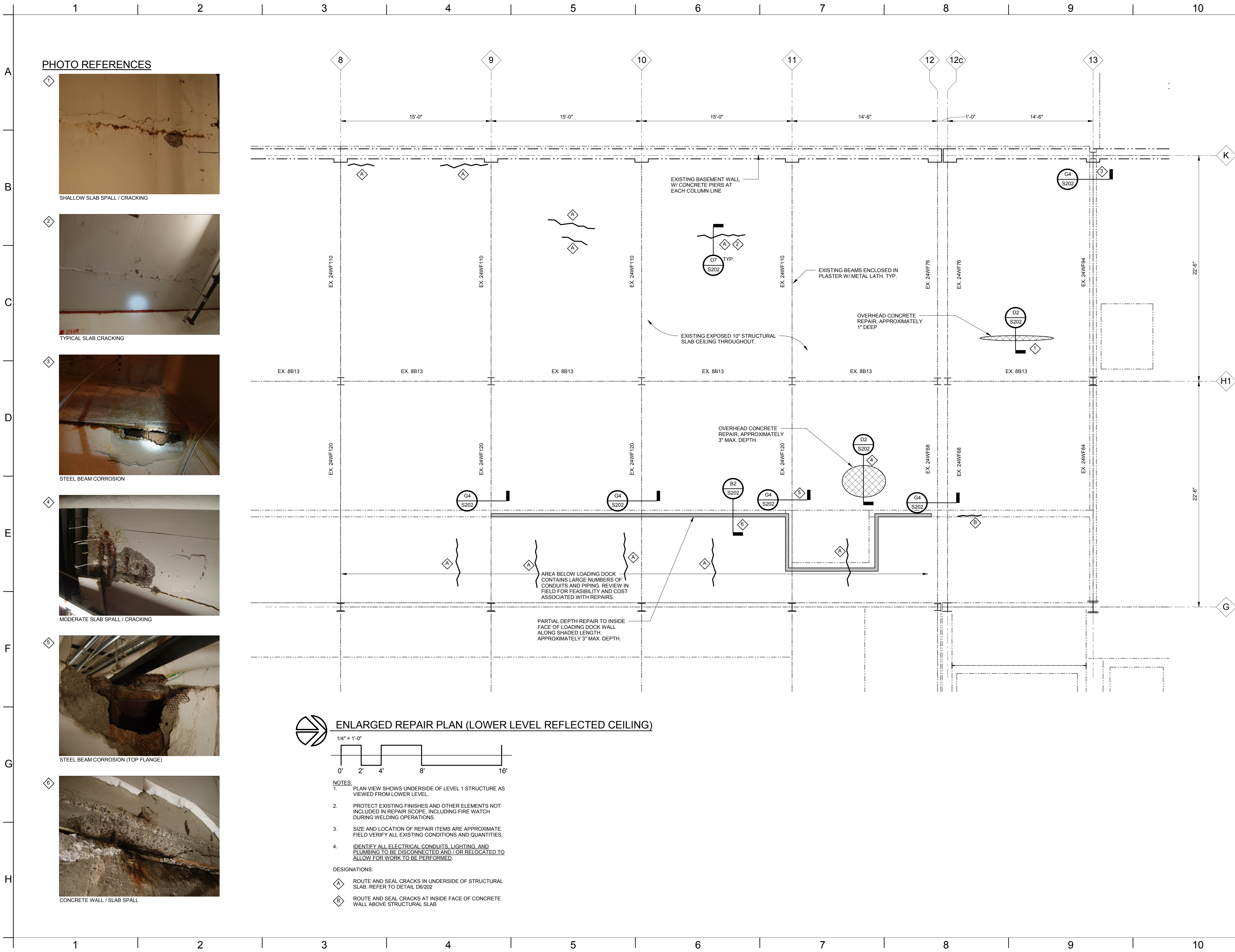
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LEVEL 1 LOADING  
DOCK NEW WORK  
PLAN

Sheet No.

S101





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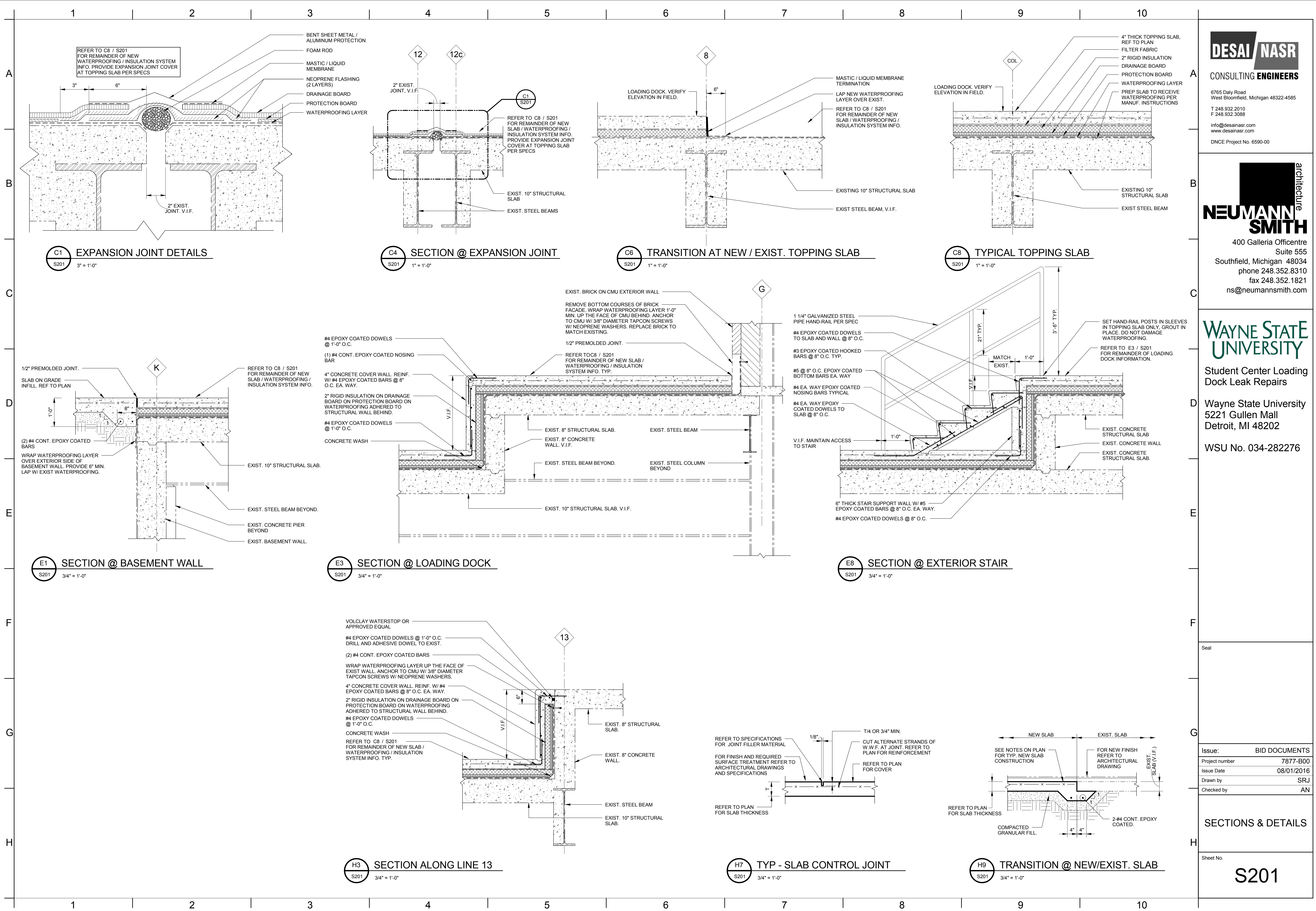
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**STRUCTURAL REPAIR PLAN**

Sheet No.

**S101-R**





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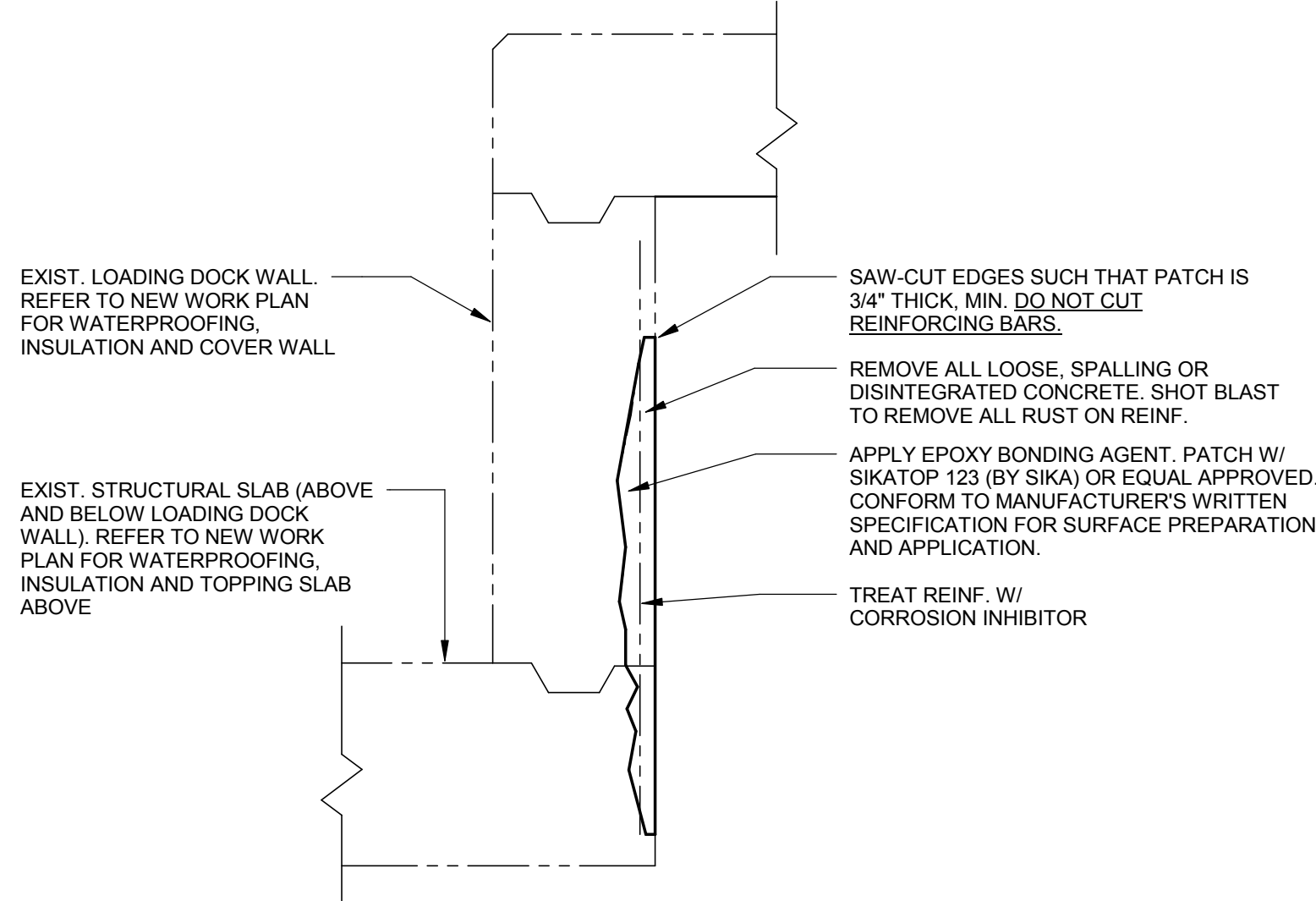
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SECTIONS & DETAILS

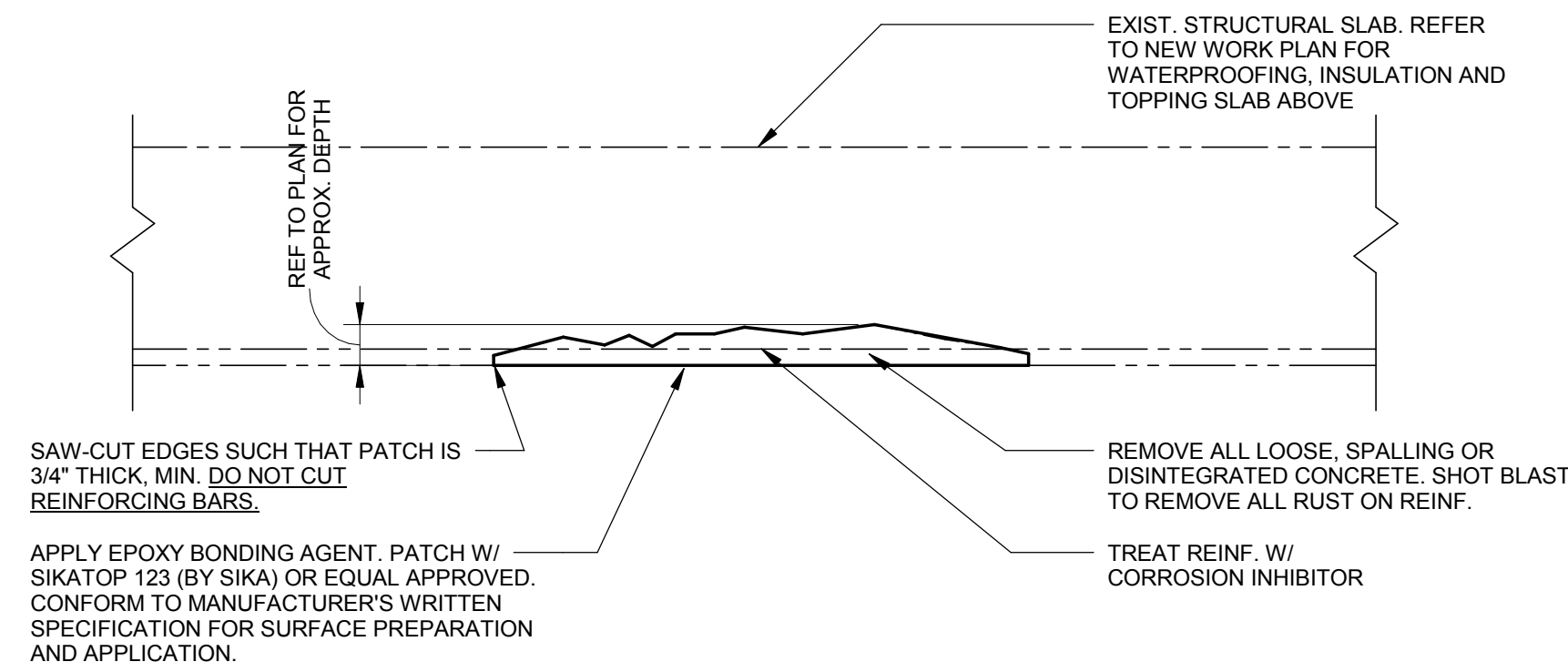
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**S201**

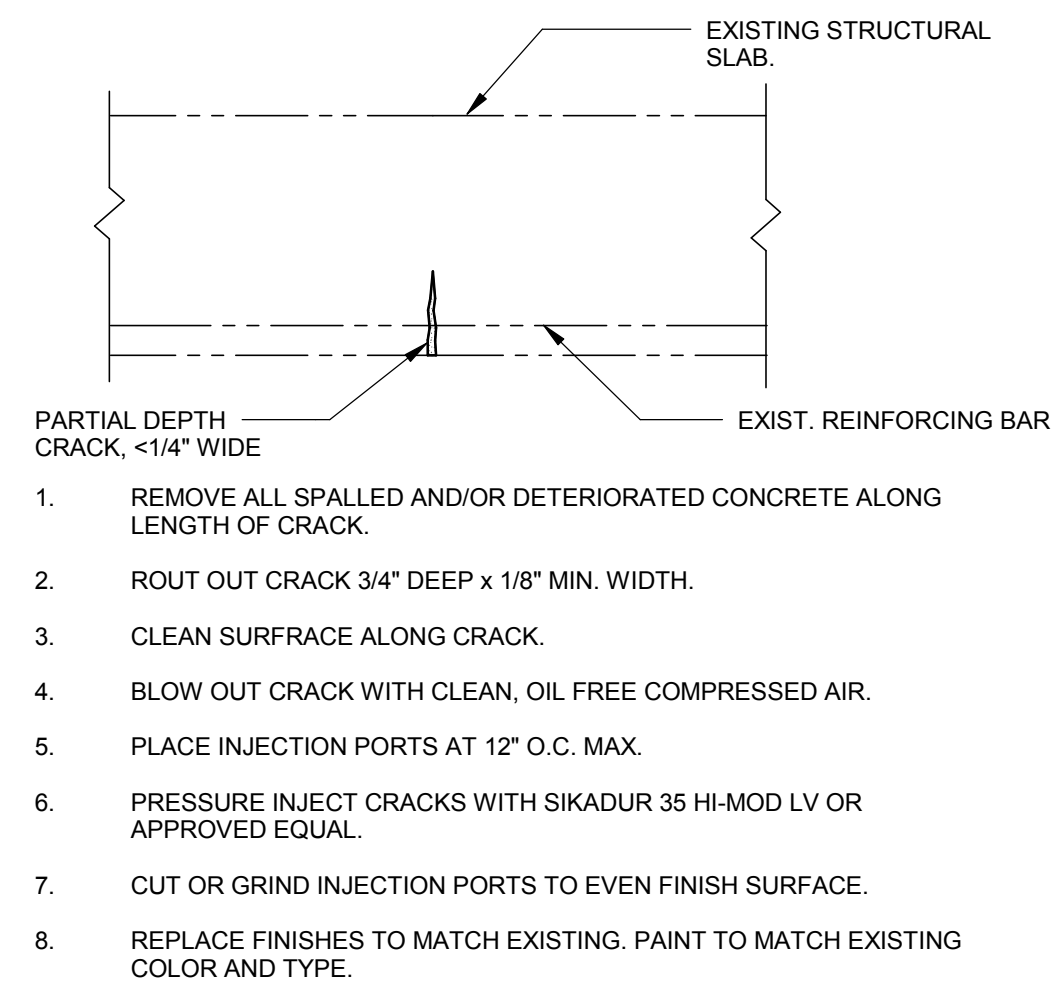




**B2 CONCRETE WALL REPAIR**  
S202 1 1/2" = 1'-0"

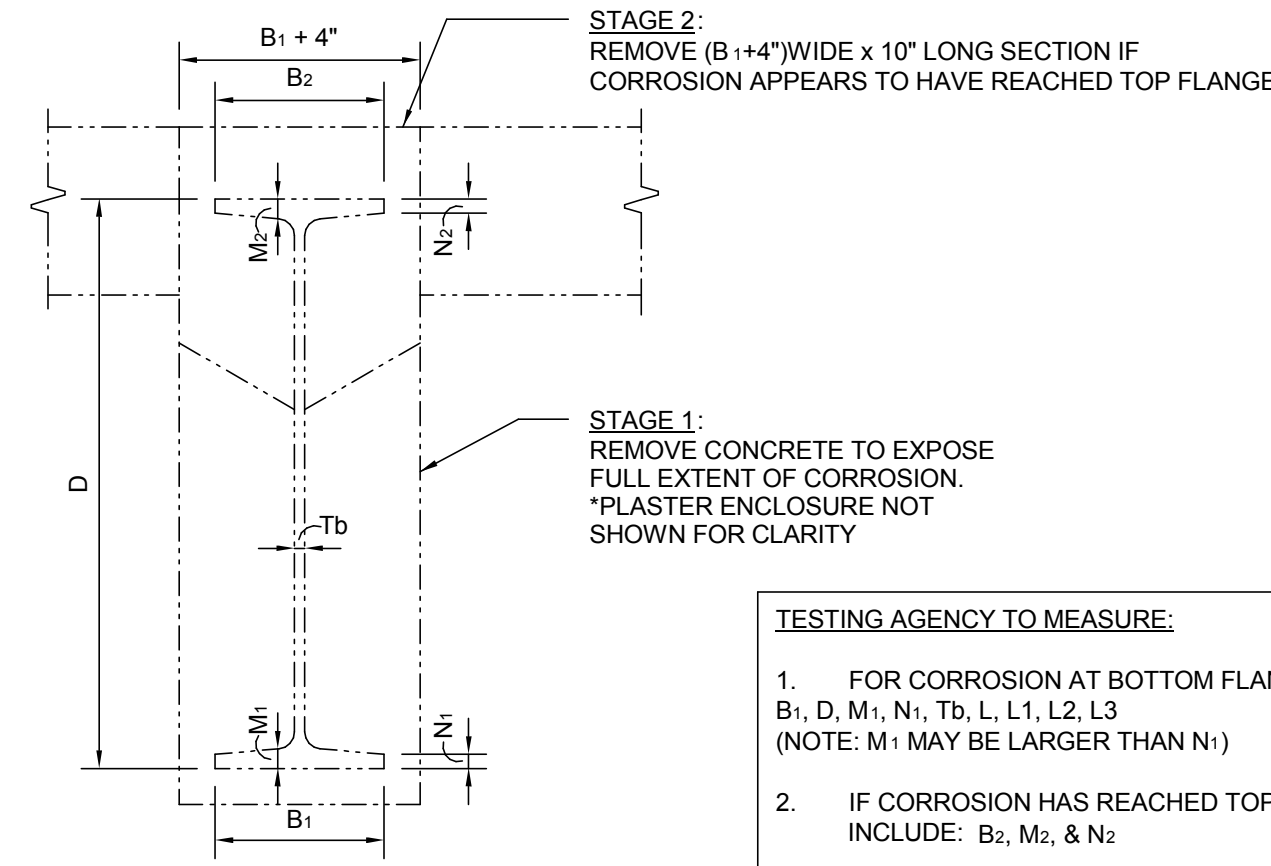


D2 CONCRETE SLAB REPAIR  
S202 1 1/2" = 1'-0"

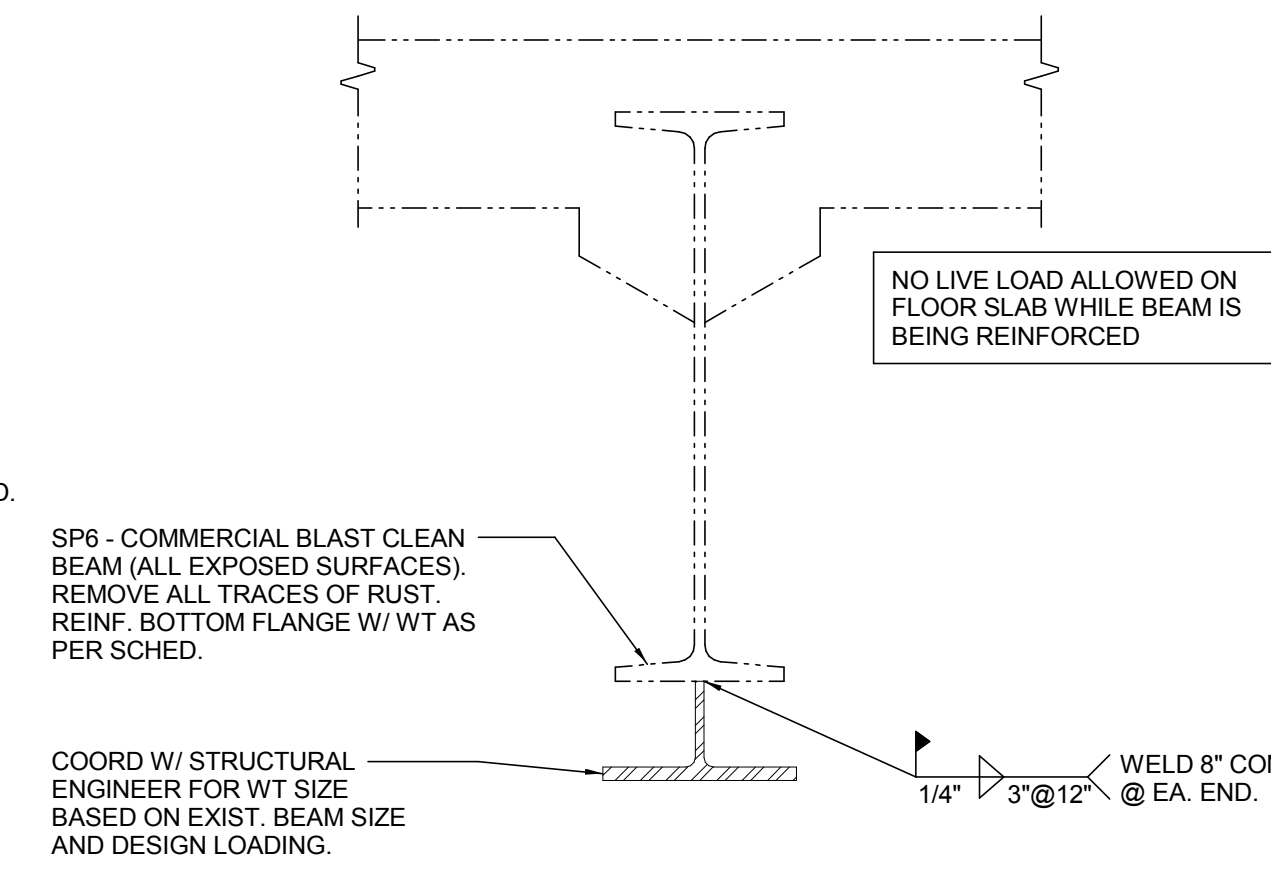


D7 EPOXY CRACK REPAIR  
S202 1 1/2" = 1'-0"

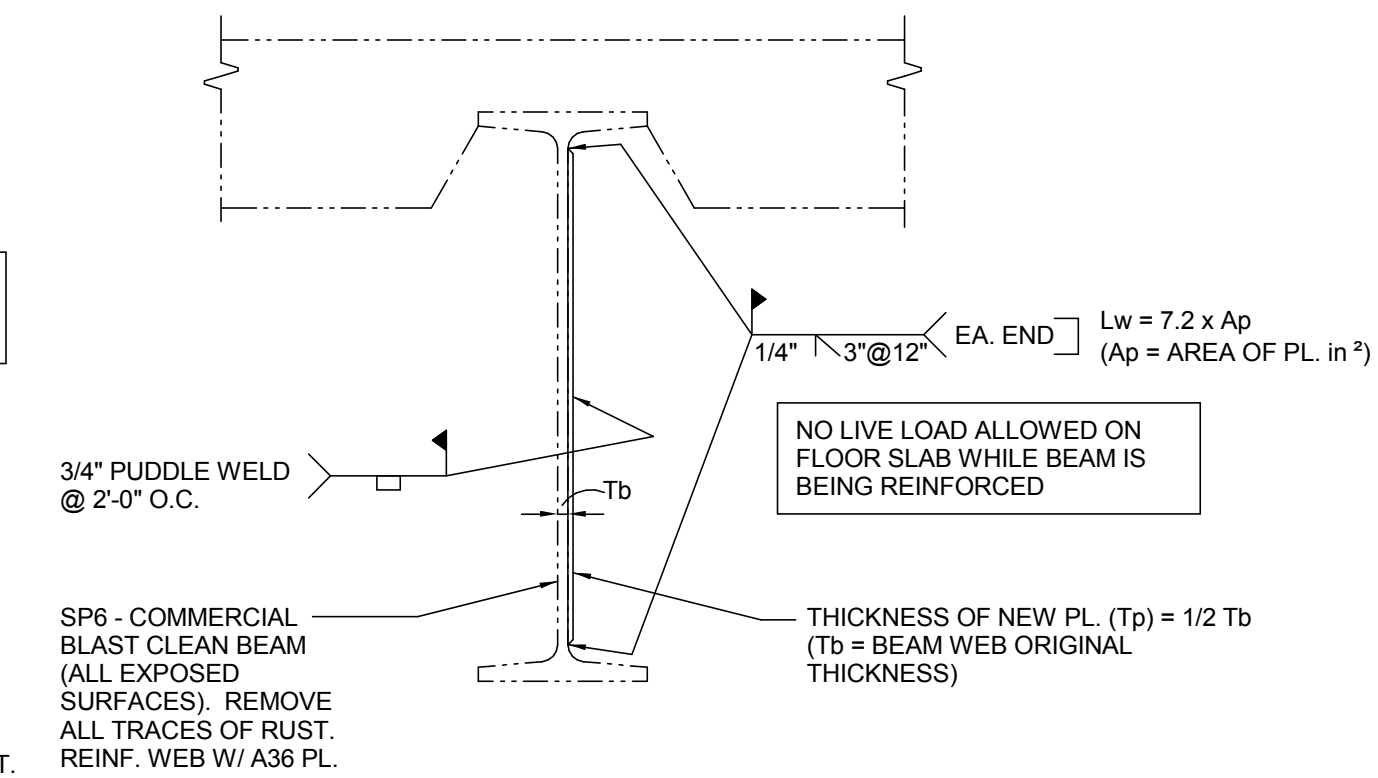
1. BIDDERS TO PROVIDE BASE PRICE FOR QUANTITIES SHOWN IN SPECS PLUS UNIT PRICES FOR REPAIR ITEMS BEYOND ESTIMATED SCOPE.
2. REPLACE FINISHES TO MATCH EXISTING. PATCH PLASTER ENCLOSURE AROUND STEEL BEAMS TO MATCH EXISTING. PAINT PLASTER ENCLOSURE AND UNDERSIDE OF STRUCTURAL SLAB TO MATCH EXISTING COLOR AND TYPE.
3. IDENTIFY ALL ELECTRICAL CONDUITS, LIGHTING, AND PLUMBING TO BE DISCONNECTED AND / OR RELOCATED TO ALLOW FOR WORK TO BE PERFORMED.



### STEP 1 (BEAM TEST)



## STEP 2B (BEAM REPAIR)



### STEP 2C (BEAM REPAIR)

- BEAM CORROSION TESTING NOTES**
1. AFTER COMPLETING STEP 1, PROCEED TO STEP 2 AS FOLLOWS:
    - A. REFER TO STEP 2A:
      - i. FOR BOTTOM FLANGE CORROSION >5% & <10%,
    - B. REFER TO STEP 2B:
      - i. FOR BOTTOM FLANGE CORROSION >10% & <25%, OR
      - ii. FOR TOP FLANGE CORROSION >5% & <10%, OR
      - iii. FOR TOP AND BOTTOM FLANGE CORROSION >10% & <20%
    - C. REFER TO STEP 2C:
      - i. FOR WEB CORROSION >5% & <35%
    - D. PERFORMING ONE TYPE OF CORROSION REPAIR (FLANGE OR WEB) DOES NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE OTHER TYPE OF CORROSION REPAIR IF NECESSARY.
    - E. REPLACE BEAM
      - i. FOR TOP OR BOTTOM FLANGE CORROSION >25%, OR
      - ii. FOR TOP AND BOTTOM CORROSION >10%, OR
      - iii. FOR WEB CORROSION >35%
  2. CLEAN AND PAINT ALL BEAMS W/ CORROSION INHIBITING EPOXY PAINT (INCLUDING BEAMS W/ <5% CORROSION WHERE NO REINFORCING IS REQUIRED)
  3. PATCH CONCRETE TO MATCH EXISTING
  4. REPLACE PLASTER ENCLOSURE AND PAINT TO MATCH EXISTING.



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## REPAIR DETAILS

Sheet No.

S202