LIMITED SCOPE OF REPAIRS
AT THE
FIRST AVENUE GARAGE AND STATION
PITTSBURGH, PENNSYLVANIA
MAY 3, 2024

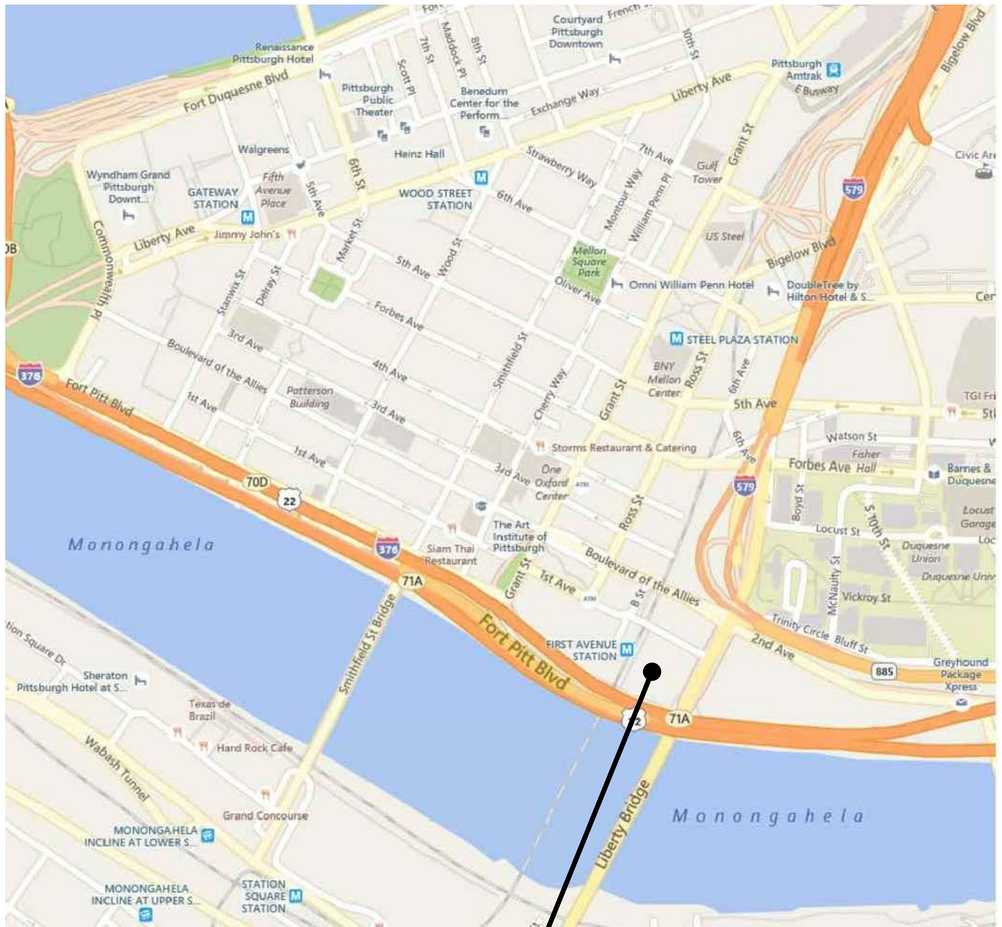
SCOPE OF WORK

NOTE: THIS IS A SUMMARY OF THE WORK AND MAY NOT INCLUDE ALL WORK ITEMS THAT THE CONTRACTOR WILL BE RESPONSIBLE FOR DURING THE PROJECT.

1. PROJECT MOBILIZATION & DEMOBILIZATION, INCLUDING ALL PERMITS AS REQUIRED.
2. IMPLEMENT REPAIRS IN A LOGICAL MANNER. THE CONTRACTOR SHALL SUBMIT PHASING PLANS TO THE OWNER AND ENGINEER FOR APPROVAL. REFER TO THE CONSTRUCTION SEQUENCE PLANS FOR WORK INCLUDED IN THE BASE BID.
3. DESIGN, INSTALLATION, AND MAINTENANCE OF THE ENTIRE SHORING SYSTEM. THE OWNER AND ENGINEER DO NOT TAKE ANY RESPONSIBILITY FOR THE DETERMINATION OF WHETHER SHORING IS REQUIRED FOR ANY REPAIRS OR NOT.
4. PERFORM CONCRETE SLAB REPAIRS AT LOCATIONS DESIGNATED ON THE DRAWINGS ACCORDING TO THE SPECIFICATIONS AND THE REPAIR DETAIL SHEETS.
5. PERFORM CONCRETE COLUMN AND BEAM REPAIRS AT LOCATIONS DESIGNATED ON THE DRAWINGS ACCORDING TO THE SPECIFICATIONS AND THE REPAIR DETAIL SHEETS.
6. DEMOBILIZE AND SWEEP CLEAN OR POWERWASH ALL AREAS AFFECTED BY THE WORK. THIS INCLUDES CLEANING ALL LIGHT FIXTURES, SIGNAGE, PARKING EQUIPMENT, STAIR TOWERS, ELEVATORS, EXHAUST EQUIPMENT, FIRE PROTECTION SYSTEM, ETC. THAT HAVE BEEN IMPACTED BY THE REPAIR PROCESS.

SHEET INDEX

LOCATION MAP



DESMAN

LIMITED SCOPE OF REPAIRS
AT THE
FIRST AVENUE GARAGE AND STATION
PITTSBURGH, PENNSYLVANIA

ISSUE

NO.	DESCRIPTION	DATE

DRAWING TITLE: COVER SHEET

DRAWING NO. **S0.00**

SCALE: NONE
DATE: 05/03/24
PROJECT NO : 51-22130

DES.	DRWN.	CK'D.
MWR	DJC	MWR

GENERAL NOTES

THE FOLLOWING GENERAL NOTES SHALL APPLY UNLESS NOTED OTHERWISE ON PLANS:

1. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL, STATE, AND NATIONAL BUILDING CODES.

2. DO NOT SCALE DIMENSIONS FROM DRAWINGS.

3. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS SHOWN ON PLANS WITH EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

4. THE CONTRACTOR SHALL REPORT IMMEDIATELY TO THE ENGINEER ANY DISCREPANCIES OR INCORRECT INFORMATION WITH THE DRAWINGS BASED ON EXISTING CONDITIONS. AFTER REPORTING THE DISCREPANCIES VERBALLY, A WRITTEN REPORT SHOULD THEN FOLLOW. THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER REGARDING THE DISCREPANCIES.

5. THE CONTRACTOR SHALL PROVIDE METHODS AND EQUIPMENT FOR PROTECTING THE STRUCTURE AND ALL MATERIALS AND PERSONNEL FROM FIRE DAMAGE PRIOR TO STARTING WORK. METHODS AND EQUIPMENT ARE SUBJECT TO APPROVAL BY THE LOCAL FIRE DEPARTMENT. THE CONTRACTOR SHALL SUBMIT THE METHODS AND EQUIPMENT TO THE ENGINEER IN WRITING AND OBTAIN THE ENGINEER'S AND OWNER'S APPROVAL PRIOR TO STARTING WORK. FIRE PROTECTION AND PREVENTION DURING THE CONSTRUCTION PERIOD SHALL BE IN ACCORDANCE WITH ALL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE LATEST N.F.P.A. REGULATIONS, O.S.H.A., AND STATE AND LOCAL REQUIREMENTS.

6. THE CONTRACTOR SHALL COMPLY WITH ALL SAFETY AND HEALTH LAWS AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, PROVISIONS AND REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND/OR THE CONSTRUCTION SAFETY ACT OF 1969, AS AMENDED (WHICHEVER IS APPLICABLE) AND WITH ALL MOST RECENT APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC AUTHORITY HAVING JURISDICTION AND SAFETY OF PERSONS OR PROPERTY OR TO PROTECT THEM FROM DAMAGE, INJURY OR LOSS. HE SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNING AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS, AND NOTIFYING THE OWNER AND USERS OF ADJACENT UTILITIES. THE CONTRACTOR SHALL ASSURE THAT ALL OF HIS SUBCONTRACTORS ALSO CONFORM TO ALL HEALTH AND SAFETY LAWS AND REGULATIONS. THE CONTRACTOR SHALL AT ALL TIMES HAVE AN O.S.H.A. CERTIFIED "COMPETENT PERSON" ON THE JOB AND AN INDIVIDUAL TRAINED AND CERTIFIED IN FIRST AID BY THE AMERICAN RED CROSS.

7. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, AND SHEETING REQUIRED FOR SAFETY AND PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE METHOD OF SHORING. SHORING SHALL BE SEALED BY AN ENGINEER LICENSED IN THE STATE WHERE THE WORK WILL OCCUR.

8. THE CONTRACTOR SHALL NOT DEMOLISH ANY EXISTING STRUCTURAL ELEMENT IN THE STRUCTURE PRIOR TO INSTALLATION OF PROPER SHORING MEMBERS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL NOT ATTEMPT TO BRING ANY VEHICLE OR EQUIPMENT INTO THE FACILITY PRIOR TO INSTALLATION OF PROPER SHORING MEMBERS APPROVED BY THE ENGINEER AND OF WHICH THE REQUIREMENTS ARE SHOWN ON PLANS. ANY VEHICLE AND/OR EQUIPMENT TO BE BROUGHT INTO THE FACILITY SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR IS SOLELY RESPONSIBLE TO PREPARE SHOP DRAWINGS FOR THE SHORING MEMBERS AND TO SUBMIT THEM TO THE ENGINEER FOR APPROVAL.

9. WHEN THE PLANS INCLUDE INFORMATION PERTAINING TO SURFACE OBSERVATION, MATERIAL TESTING, AND OTHER PRELIMINARY INVESTIGATIONS, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION, CHARACTER, OR QUALITY OF THE MATERIALS ENCOUNTERED AND IS ONLY INCLUDED FOR CONVENIENCE OF THE BIDDER. THE OWNER/ENGINEER ASSUMES NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION, AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS INDICATED ARE REPRESENTATIVE OF THOSE EXISTING THROUGHOUT THE WORK, OR THAT UNANTICIPATED DEVELOPMENTS MAY NOT OCCUR. SAID INFORMATION SHALL NOT BE CONSIDERED BY THE PARTIES AS A BASIS FOR THE CONTRACT AWARD AMOUNT.

10. ANY EXTRA WORK BEYOND THE SCHEDULED QUANTITIES REQUIRING ADDITIONAL COST TO THE OWNER SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO TAKING SUCH ACTION. CLAIMS FOR EXTRA WORK WHICH HAVE NOT BEEN AUTHORIZED IN WRITING BY THE OWNER AND APPROVED BY THE ENGINEER WILL BE REJECTED AND THE CONTRACTOR SHALL NOT BE ENTITLED TO PAYMENT. THE CONTRACTOR SHALL PROMPTLY SUBMIT THE PROPOSAL FOR EXTRA WORK, IN WRITING, AS ADDITIONAL WORK IS DISCOVERED.

11. THE PLANS MAY BE SUPPLEMENTED BY STANDARD AND WORKING DRAWINGS AS ARE NECESSARY TO ADEQUATELY DESCRIBE THE WORK. IN THE SOLE JUDGMENT OF THE ENGINEER, IF AN EVENT A CHANGE BECOMES NECESSARY IN THE BEST INTERESTS OF THE PROJECT, DUE TO CIRCUMSTANCES NOT KNOWN UNTIL THE BID DOCUMENTS WERE SUBMITTED TO THE OWNER OR ARISING THEREAFTER, THE ENGINEER MAY ALTER THE PLANS AS MAY BE NECESSARY AND INCREASE OR DECREASE THE QUANTITIES OF WORK TO BE PERFORMED IN ACCORDANCE WITH SUCH CHANGES. THE OWNER SHALL BE INFORMED WITH A COPY OF ALL SUBMITTALS AND CORRESPONDENCE AS THE CHANGES MAY OCCUR.

12. EXECUTION OF THE WORK WILL INVOLVE CONSIDERATION FOR ALLOWING THE OWNER TO CONTINUE TO USE AREAS OUTSIDE THE REPAIR AREA AND THE FACILITIES ABOVE AND SURROUNDING THE AREAS UNDER REPAIR. PRIOR TO THE AWARD OF THE CONTRACT, THE CONSTRUCTION SCHEDULE PREPARED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE OWNER AND COORDINATED WITH THE FACILITY MANAGEMENT. OWNER'S APPROVAL OF THE PROPOSED SCHEDULE SHALL PRECEDE THE CONTRACT AWARD.

13. THE CONTRACTOR SHALL REVIEW ALL EXISTING CONDITIONS TO DETERMINE ALL SERVICES (ELECTRICAL, HVAC, PLUMBING) AFFECTED BY THE REPAIR WORK. HE SHALL MAKE NECESSARY TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SERVICES TO ALL AREAS OF THE FACILITY OR OTHER AREAS NOT IN THE CONTRACT AFFECTED BY THE WORK. THE CONTRACTOR SHALL SUBMIT THE METHODS AND SCHEDULE OF CONNECTIONS FOR THE OWNER'S APPROVAL PRIOR TO COMMENCEMENT,

14. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL PRODUCE "AS-BUILT" DRAWINGS FOR THE INSTALLATION OF ALL REPAIR ITEMS UNDER THE CONTRACT. THE ENGINEER WILL PROVIDE THE GENERAL CONTRACTOR WITH A SET OF REPRODUCIBLES FOR THIS PURPOSE. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE "AS-BUILT" DRAWINGS UPDATED ACCORDING TO THE JOB PROGRESS. FOR EACH PAY REQUEST BY THE CONTRACTOR, THE OWNER AND ENGINEER SHALL RECEIVE A COPY OF THE UPDATED "AS-BUILT" DRAWINGS.

15. WORK AREA ENCLOSURES: FLOOR-TO-CEILING PLYWOOD PARTITIONS/ENCLOSURES ARE TO BE UTILIZED WHERE THE CONSTRUCTION AREAS ABUT AREAS OF THE GARAGE OR THE ADJACENT GARAGE THAT ARE TO REMAIN OPEN TO THE PUBLIC. AT ALL OTHER OPEN AIR LOCATIONS, PRIMARILY AT THE EXTERIOR ELEVATIONS OF THE GARAGE, THE OPENINGS SHALL BE SEALED WITH 10 MIL POLYETHYLENE SHEETING. THE MATERIALS THAT ARE UTILIZED TO ENCLOSE THE CONSTRUCTION AREAS SHALL RESULT IN A NEAR AIR-TIGHT SEAL, WHICH WILL CONTROL AND PREVENT THE DISPERSION OF DUST AND DEBRIS. CONTRACTOR MAY BE REQUIRED TO UTILIZE EXPANDABLE FOAMS, CLAMPS, AND VARIOUS ADHESIVES TO PROVIDE A NEAR AIR TIGHT ENCLOSURE. EQUIP PARTITIONS WITH DUST RESISTANT DOORS AND SECURITY LOCKS. THE FLOOR PLANS INDICATE THE LOCATIONS AND TYPES OF ENCLOSURES REQUIRED FOR THIS PROJECT.

CONSTRUCTION NOTES

1. CODES AND STANDARDS: ALL STRUCTURAL REPAIR WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF ALL STATE BUILDING CODES AND WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS:

   A. ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
   B. ACI 305 "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING"
   C. ACI 306 "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING"
   D. ACI 309 "RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE"
   E. ACI 311 "RECOMMENDED PRACTICE FOR CONCRETE INSPECTION"
   F. ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
   G. ACI 347 "FORMWORK FOR CONCRETE"
   H. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   I. AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"
   J. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS"
   K. AWS D1.1 "STRUCTURAL WELDING CODE"

2. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.

3. THE ENGINEER SHALL HAVE AUTHORITY TO REJECT WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS. THE ENGINEER AND OWNER WILL HAVE AUTHORITY TO REQUIRE SPECIAL INSPECTION OR TESTING OF THE WORK. HOWEVER, NEITHER THE ENGINEER'S AUTHORITY TO ACT UNDER THIS SUBPARAGRAPH NOR ANY DECISION MADE BY HIM IN GOOD FAITH TO EXERCISE OR NOT EXERCISE SUCH AUTHORITY, SHALL GIVE RISE TO ANY DUTY OR RESPONSIBILITY OF THE ENGINEER TO THE CONTRACTOR, ANY SUBCONTRACTOR, ANY OF THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK.

4. THE CONTRACTOR SHALL MAINTAIN, ON SITE, ONE COMPLETE SET OF DRAWINGS (WHITE PRINTS) AND SPECIFICATIONS FURNISHED BY THE OWNER AT THE CONTRACTOR'S EXPENSE, AN ACCURATE RECORD OF THE INSTALLATION OF ALL MATERIALS AND SYSTEMS COVERED BY THE CONTRACT. THE "AS-BUILT" RECORD SHALL INDICATE EXACT LOCATION AND AMOUNT OF ALL WORK. THE COMPLETED SET OF "AS-BUILT" DRAWINGS MUST BE DELIVERED TO THE OWNER AND ENGINEER AS SOON AS THE PROJECT IS FINISHED.

5. ANY EQUIPMENT GREATER THAN 6,000 LBS. SHALL REQUIRE SPECIALIZED SHORING OF THE SUPPORTED SLAB. THE ENGINEER SHALL REVIEW AND APPROVE SHORING PRIOR TO STARTING WORK. ALL LOOSE CONCRETE ADJACENT TO A REPAIR AREA ON THE SOFFIT OF A SUPPORTED SLAB SHALL BE REMOVED PRIOR TO STARTING WORK. ALL NOISE AND DUST PRODUCING OPERATIONS ARE LIMITED TO THE OWNER'S SATISFACTION AND LOCAL CODE REQUIREMENTS.

6. THE NEW CONCRETE SHALL BE PLACED, CONSOLIDATED, AND FINISHED TO MATCH EXISTING FINISH ELEVATIONS. ALL NEW CONCRETE MAY BE OPEN TO SERVICE LOADS AFTER THE NEW CONCRETE HAS ACHIEVED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. THE SHORING AND FALSEWORK SHALL BE LEFT IN PLACE UNTIL THE NEW CONCRETE ACHIEVES AT LEAST 80% OF THE DESIGN COMPRESSIVE STRENGTH.

7. HAND-HELD PNUEMATIC HAMMERS MAY BE UTILIZED TO REMOVE AREAS OF CONCRETE SCHEDULED TO BE REMOVED. MAXIMUM HAMMER SIZE SHALL NOT EXCEED 30 LBS. THE USE OF HOE RAMS AND HYDRO-DEMOLITION IS PROHIBITED.

CONCRETE PROCEDURE NOTES

1. ESTABLISH A BENCH MARK AND SHOOT ELEVATIONS OF THE EXISTING SLAB, INCLUDING BOTH INSIDE AND OUTSIDE OF REPAIR AREAS. MAINTAIN A RECORD OF THE ELEVATIONS BEFORE, DURING, AND UPON COMPLETION OF REPAIR WORK.

2. INSTALL TRAFFIC DEVICES FOR PROPER MAINTENANCE AND PROTECTION OF TRAFFIC DURING CONSTRUCTION. DUSTPROOF FLOOR-TO-CEILING PARTITIONS SHALL BE ERECTED AROUND AND DIRECTLY BENEATH WORK AREA.

3. PROVIDE ADEQUATE SHORING AND BRACING FOR THE SAFE AND PROPER EXECUTION OF THE WORK. ALL SHORING SHALL BE CARRIED TO GRADE. SEE DETAIL 3, DWG S2.02.

4. SAWCUT PERIMETER OF AREA TO BE REPAIRED WITHOUT CUTTING REINFORCING STEEL. REMOVE DETERIORATED CONCRETE. REINFORCING BARS THAT HAVE LOST 20% OR MORE OF THEIR CROSS-SECTIONAL AREA SHALL BE SUPPLEMENTED. BARS THAT HAVE BEEN CUT OR HAVE GREATER THAN 50% SECTION LOSS SHALL BE REPLACED WITH NEW EPOXY-COATED REBAR. NEW REBAR SHALL BE LAP SPLICED. IF THERE IS INSUFFICIENT DEVELOPMENT LENGTH, DOWELS (DETAIL 4, DWG S2.02) AND MECHANICAL FASTENERS (DETAIL 5, DWG S2.02) SHALL BE USED.

5. INSTALL THE NECESSARY FALSEWORK (FOR FULL DEPTH REPAIRS) AND PROVIDE NEW EPOXY COATED REINFORCING STEEL AND WELDED WIRE FABRIC TO MATCH THE EXISTING LAYOUT.

6. FOR FLAT SLAB AND FULL DEPTH REPAIR AREAS PLACE, CONSOLIDATE, AND FINISH NEW FIBER REINFORCED CONCRETE.

7. FOR VERTICAL AND OVERHEAD REPAIR AREAS, APPLY APPROVED SHOTCRETE OR FORM AND PUMP MATERIAL IN LAYERS OF LIMITED THICKNESS AS PER THE MANUFACTURERS RECOMMENDATIONS AND THE SPECIFICATIONS.

8. CURING OF NEW CONCRETE SHALL BE BY APPROVED METHODS AND THE MINIMUM PERIOD FOR MAINTENANCE OF MOISTURE AND TEMPERATURE SHALL BE 3 DAYS OR THE TIME NECESSARY TO ATTAIN 80% OF THE SPECIFIED COMPRESSIVE STRENGTH, WHICHEVER PERIOD IS GREATER. THE SAME REQUIREMENTS SHALL APPLY FOR REMOVAL OF FALSEWORK AND SHORING.

9. NO SURFACE TREATMENTS (SEALER OR WATERPROOF MEMBRANE) SHALL BE APPLIED TO NEW CONCRETE WITHIN THE FIRST 28 DAYS AFTER PLACEMENT.

10. MAINTAIN OR IMPROVE THE EXISTING SLOPE TO PROVIDE POSITIVE DRAINAGE ON THE FINISHED DECK SURFACE.

11. EXPOSED REPAIR SURFACES SHALL NOT CONTAIN FINS, OFFSETS, SHOULDERS, OR PASTE LEAKING DUE TO POORLY FIT FORMS. A SAMPLE REPAIR AREA SHALL BE FORMED AND PLACED AT THE BEGINNING OF THE PROJECT IN ORDER TO ESTABLISH A STANDARD OF ACCEPTABILITY.

12. ALL CRACKS IN NEW CONCRETE, NEW CONSTRUCTION JOINTS AND COVE JOINTS SHALL HAVE A JOINT SEALANT INSTALLED PER SPECIFICATIONS AS SHOWN IN THE DETAILS.

REINFORCED CONCRETE NOTES

1. ALL REINFORCED CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

2. MATERIALS:

   A. THE 28-DAY COMPRESSIVE STRENGTH OF ALL NEW CONCRETE SHALL BE A MINIMUM OF 5,000 PSI UNLESS OTHERWISE NOTED.
   B. ALL NEW REINFORCING STEEL SHALL BE EPOXY COATED REBAR AND CONFORM TO ASTM A775 (60,000 PSI YIELD).

3. ALL DIMENSIONS SHOWN FOR LOCATION OF REINFORCING STEEL ARE TO THE FACE OF MAIN BARS AND DENOTE MINIMUM CLEAR COVER. UNLESS SPECIFICALLY NOTED, CONCRETE COVER FOR NEW EPOXY COATED REINFORCING STEEL SHALL BE:

   REINFORCING STEEL IN CONCRETE CAST AGAINST EARTH – 3"

   #6 OR LARGER BARS IN CONCRETE EXPOSED TO WEATHER OR TRAFFIC – 2"
   #5 OR SMALLER BARS AND W.W.F. IN CONCRETE EXPOSED TO WEATHER OR TRAFFIC – 1 1/2"

   REINFORCING STEEL NOT EXPOSED TO EARTH, WEATHER, OR TRAFFIC:
   #11 OR SMALLER BARS IN SLABS, WALLS, AND JOISTS – 3/4"
   ALL BARS IN BEAMS AND COLUMNS – 1 1/2"
   ALL EXISTING REINFORCING STEEL (TOP OR BOTTOM) – 3/4"

4. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN THE FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". BAR SUPPORT IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.

5. SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING, AND PLACEMENT, SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION.

6. FORMS FOR ALL CONCRETE WORK, IF USED, SHALL BE TIGHT, LEAKPROOF, AND PROVIDE THE NECESSARY RIGIDITY TO SUPPORT THE IMPOSED LOADS WITHOUT ANY SETTLEMENT OR DEFORMATION.

7. ALL REINFORCING SPLICES SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF ACI 318, BUT IN NO CASE WILL IT BE LESS THAN THE LENGTHS NOTED BELOW, UNLESS NOTED ON THE DRAWINGS. WELDED WIRE FABRIC SHALL BE LAPPED 2 FULL MESH PANELS AND TIED SECURELY. WHERE REQUIRED, DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING BARS AND BE SPLICED ACCORDING TO THE TABLE BELOW, UNLESS NOTED OTHERWISE.

LAP SPLICE LENGTHS FOR BARS IN TENSION AND TEMPERATURE STEEL

BAR SIZE	UNCOATED REINFORCEMENT	EPOXY-COATED REINFORCEMENT
3	17"	25"
4	22"	33"
5	28"	41"
6	33"	50"
7	48"	72"
8	55"	83"
9	62"	93"

TABLE NOTES:

- CLASS B SPLICE
- NORMAL WEIGHT CONCRETE
- COMPRESSIVE STRENGTH = 5000 PSI
- GRADE 60 REINFORCING STEEL
- LESS THAN 12" OF CONCRETE CAST BELOW REINFORCING STEEL
- CLEAR COVER BETWEEN 1 AND 3 BAR DIAMETERS
- BAR SPACING BETWEEN 2 AND 6 BAR DIAMETERS

BUILDING CODE NOTES

1. THE PROPOSED WORK IS COMPLIANT WITH 2018 IBC REQUIREMENTS.
2. CONSTRUCTION TYPE – IIB
3. OCCUPANCY CLASSIFICATION – GROUP S-2
4. NO WORK IS BEING PERFORMED TO THE FIRE AND/OR SMOKE RATED ASSEMBLIES.
5. NO WORK IS BEING PERFORMED TO THE FIRE PROTECTION SYSTEMS AND THE SPRINKLER SYSTEM.
6. THE REPAIRED COLUMNS AND BEAMS WILL BE REPLACED IN-KIND AND MAINTAIN THE EXISTING FIRE RESISTANCE RATING.
7. THE WORK AREA AND ROUTE TO IT ARE COMPLIANT WITH PA UCC ACCESSIBILITY REQUIREMENTS.

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ISSUE

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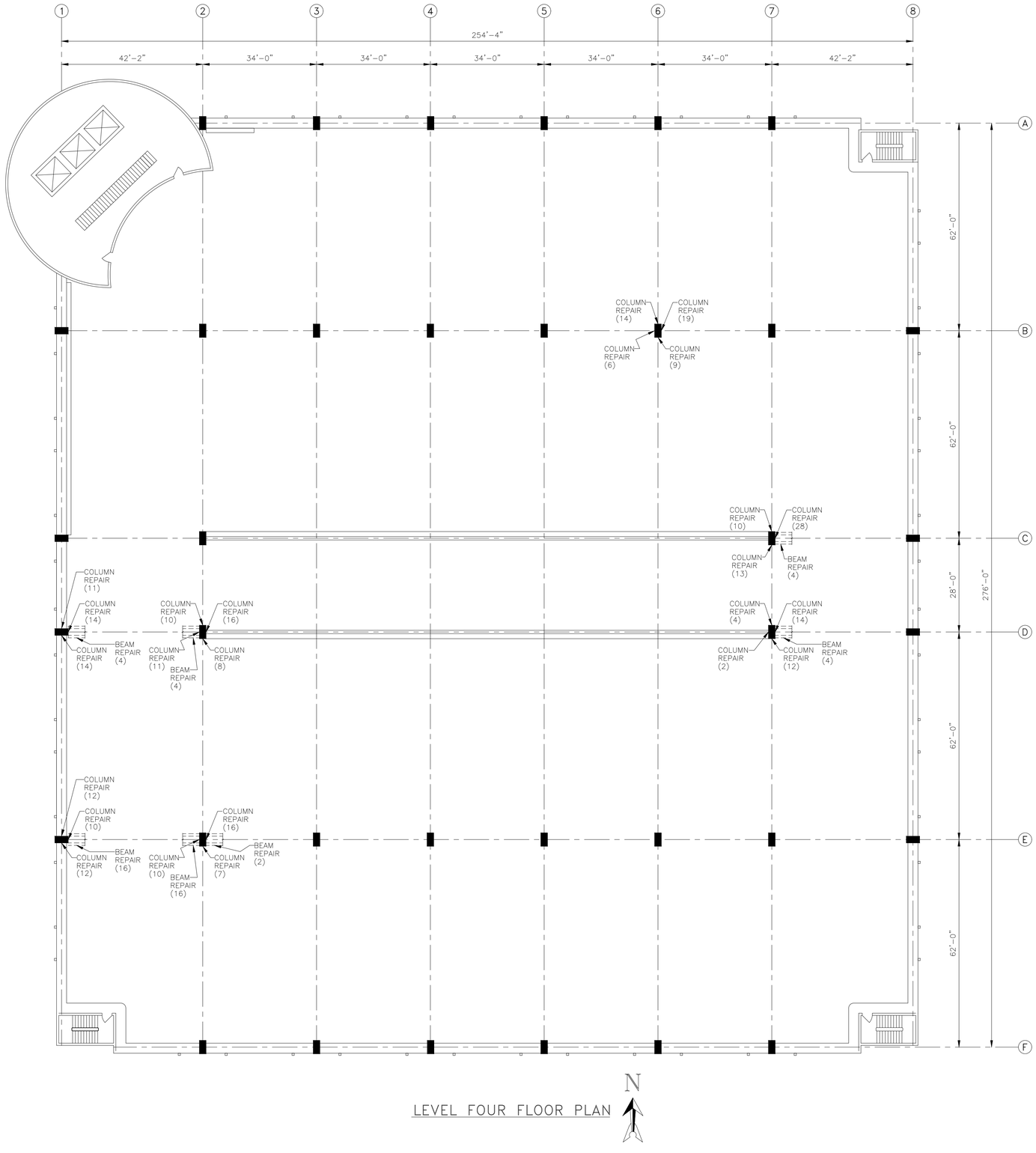
DRAWING TITLE: GENERAL NOTES

DRAWING NO. **S0.01**

SCALE: NONE
DATE: 05/03/24
PROJECT NO : 51-22130

DES.	DRWN.	CK'D.
MWR	DJC	MWR



LEVEL FOUR FLOOR PLAN

N

LEGEND:

COLUMN REPAIR (#) – DENOTES PARTIAL DEPTH COLUMN REPAIR, (AREA IN S.F.), SEE DETAIL 1, DRAWING S2.01

BEAM REPAIR (#) – DENOTES PARTIAL DEPTH BEAM REPAIR (AREA IN S.F.), SOFFIT OF LEVEL FIVE, SEE DETAIL 2, DRAWING S2.02

NOTE:

BEAM REPAIR LOCATIONS ARE LOCATED ON THE SOFFIT OF LEVEL FIVE THIS DRAWING ONLY.

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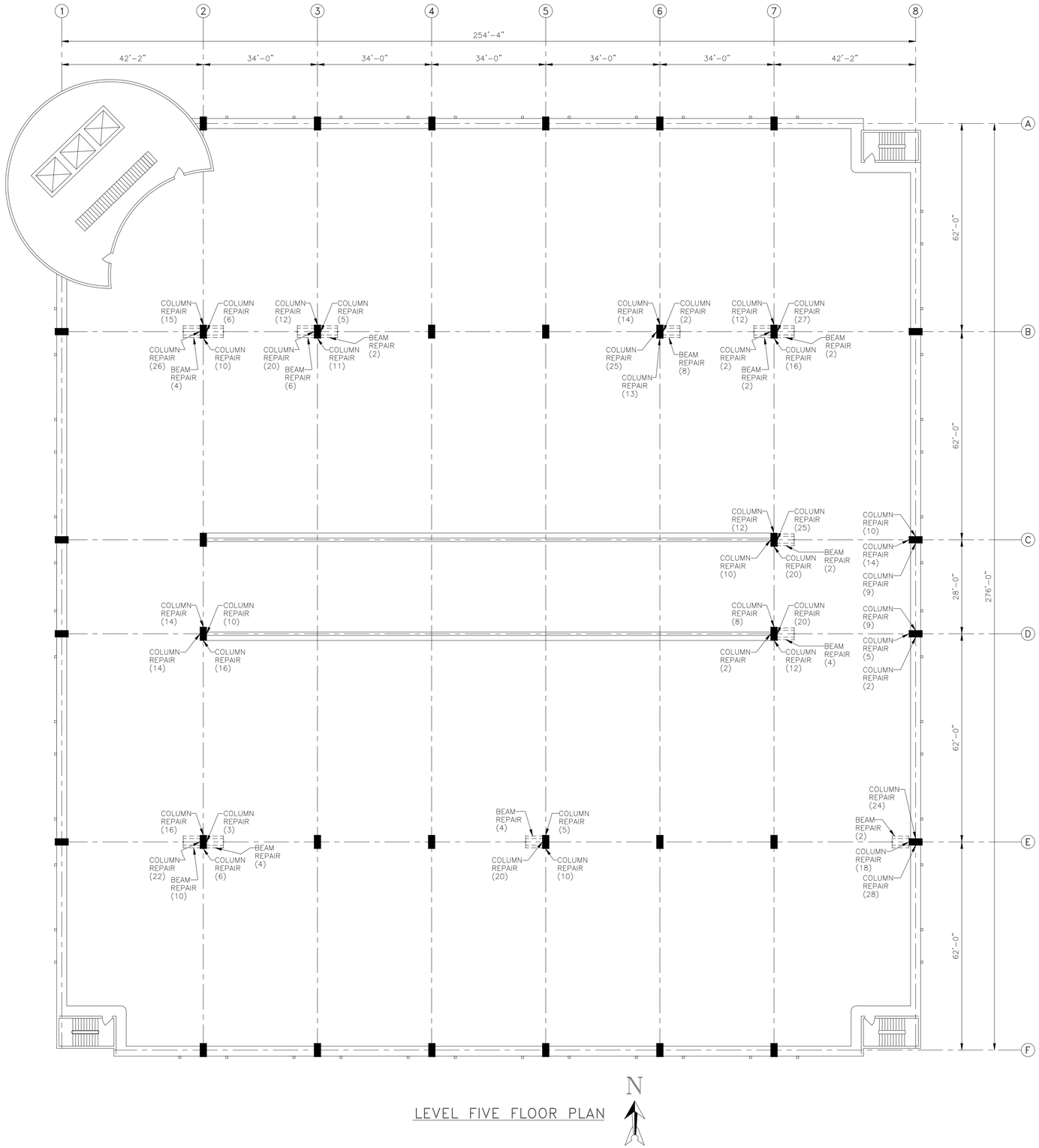
DRAWING TITLE:
LEVEL FOUR FLOOR PLAN

DRAWING NO.
S1.01

SCALE: 1/16"=1'-0"
DATE: 05/03/24
PROJECT NO : 51-22130

DES.	DRWN.	CK'D.
MWR	DJC	MWR



LEVEL FIVE FLOOR PLAN

N

LEGEND:

COLUMN REPAIR (#) – DENOTES PARTIAL DEPTH COLUMN REPAIR, (AREA IN S.F.), SEE DETAIL 1, DRAWING S2.01

BEAM REPAIR (#) – DENOTES PARTIAL DEPTH BEAM REPAIR (AREA IN S.F.), SOFFIT OF LEVEL SIX, SEE DETAIL 2, DRAWING S2.02

NOTE:

BEAM REPAIR LOCATIONS ARE LOCATED ON THE SOFFIT OF LEVEL SIX THIS DRAWING ONLY.

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DRAWING TITLE:
LEVEL FIVE FLOOR PLAN

DRAWING NO.
S1.02

SCALE: 1/16"=1'-0"
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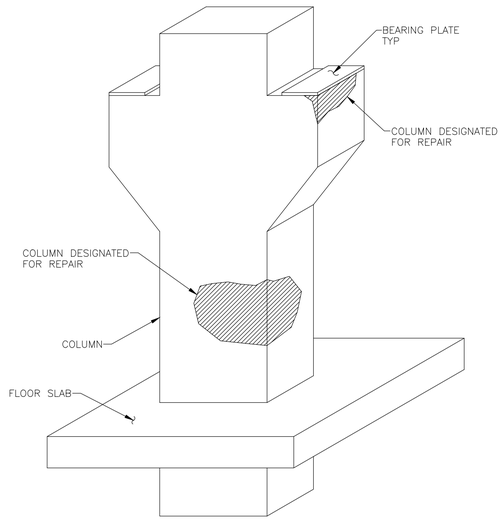
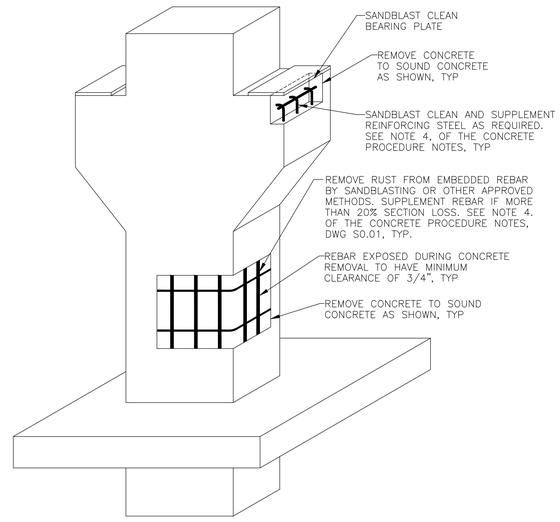
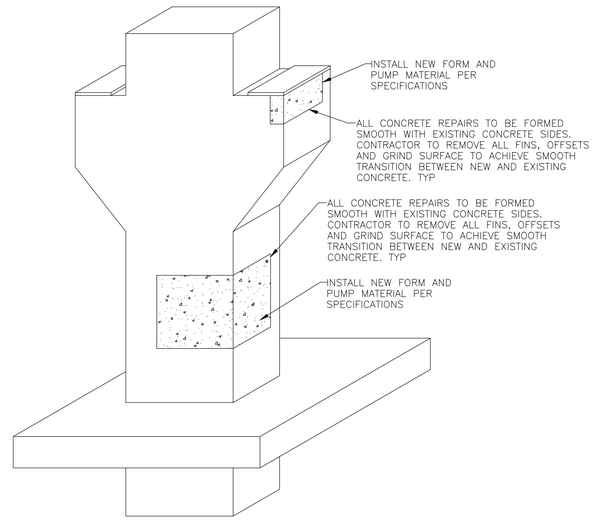


EXISTING CONDITION



CONCRETE REMOVAL

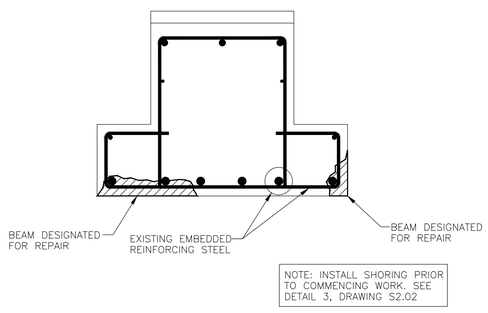


REPAIRED CONDITION

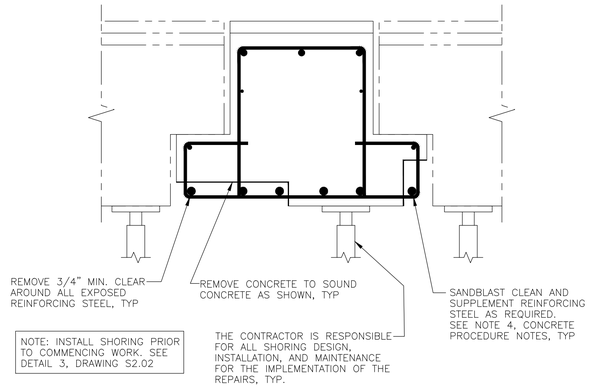
COLUMN REPAIR NOTES:

1. THE CONTRACTOR MAY NOT REMOVE THE DETERIORATED CONCRETE MORE THAN 25% OF COLUMN AREA AT ONE TIME. THE ENGINEER SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO INSPECT THE CONDITION OF THE COLUMN AREA WHERE THE DETERIORATED CONCRETE HAS BEEN REMOVED BEFORE THE CONTRACTOR REMOVES THE DETERIORATED CONCRETE AT THE NEXT LOCATION. THE CONTRACTOR MAY HAVE TO REPAIR THE COLUMN IN PHASES TO LIMIT AMOUNT OF REPAIR AREA AT ONE TIME.
2. INSTALL SHORING PRIOR TO COMMENCING WORK, SEE DETAIL 3, DRAWING S2.02.
3. COLUMN AND HAUNCH REPAIRS ARE TO BE CONSIDERED ONE AND THE SAME. ALL REPAIRS IDENTIFIED ON THE PLANS ARE DESIGNATED AS COLUMN REPAIRS.
4. COLUMN TYPE SHOWN IS TYPICAL. HOWEVER, VARIATIONS DO EXIST THROUGHOUT THE GARAGE. REPAIR TECHNIQUES, METHODS AND MATERIALS SHALL NOT CHANGE DUE TO SIZE, ORIENTATION, TYPE, ETC. OF COLUMN BEING REPAIRED.
5. BEAM NOT SHOWN FOR CLARITY. PRIOR TO IMPLEMENTING REPAIRS TO HAUNCH, CONTRACTOR IS REQUIRED TO SHORE COLUMN AND BEAMS FRAMING INTO COLUMN PER DETAIL 3, DRAWING S2.02.

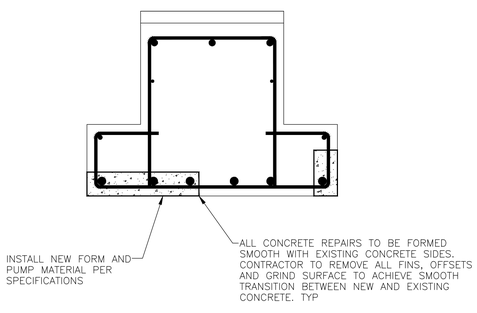
1 COLUMN REPAIR DETAIL



EXISTING CONDITION



CONCRETE REMOVAL



REPAIRED CONDITION

2 CONCRETE BEAM REPAIR DETAILS

DESMAN

LIMITED SCOPE OF REPAIRS
AT THE
FIRST AVENUE GARAGE AND STATION
PITTSBURGH, PENNSYLVANIA

ISSUE

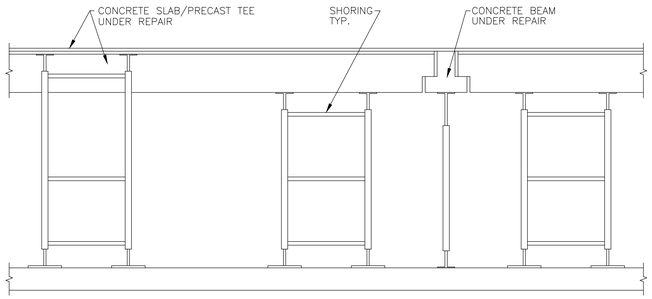
NO.	DESCRIPTION	DATE

DRAWING TITLE:
REPAIR DETAILS

DRAWING NO.
S2.01

SCALE:	NONE
DATE:	05/03/24
PROJECT NO :	51-22130

DES.	DRWN.	CK'D.
MWR	DJC	MWR



NOTE: THIS SKETCH IS FOR DEMONSTRATIVE PURPOSES, AND DOES NOT IMPLY ANY SHORING CONCEPTS, DESIGNS, OR TECHNIQUES TO THE CONTRACTOR, SHORING DESIGNER, OR ERECTOR.

SHORING NOTES

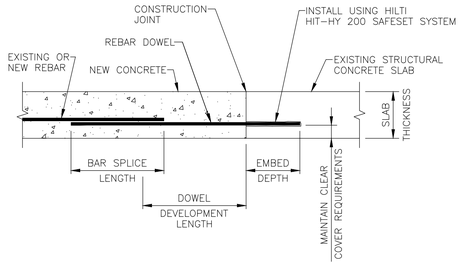
1. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, AND SHEETING REQUIRED FOR SAFETY AND PROPER EXECUTION OF THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE ALL OF THE SHORING DESIGN, INSTALLATION, AND MAINTENANCE FOR THE IMPLEMENTATION OF THE REPAIRS.
2. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR THE ERECTION AND MAINTENANCE OF THE SHORING SYSTEM DURING THE REPAIR WORK. ON A DAILY BASIS, THE SHORING SYSTEM SHALL BE CHECKED TO ENSURE TIGHTNESS TO THE SOFFIT AT ALL LOCATIONS.
3. SUFFICENT LATERAL SUPPORT MUST BE PROVIDED WHERE NECESSARY TO PREVENT THE IMPOSITION OF LATERAL LOADS ON THE SHORING SYSTEM.
4. TOWER LEG LOADING SHOULD BE AS UNIFORMLY DISTRIBUTED AS POSSIBLE. NEVER LOAD ONE LEG OF FRAME OR ONE LEDGER OF A TOWER.
5. THE SHORING SHALL REMAIN IN PLACE UNTIL THE NEW CONCRETE HAS ACHIEVED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI OR 80% OF ITS DESIGN COMPRESSIVE STRENGTH.
6. SHORING SYSTEM SHOULD BE INSTALLED AND MAINTAINED PER PUBLISHED SAFETY RULES AND REGULATIONS OF THE SCAFFOLD AND SHORING INSTITUTE.
7. THE CONTRACTOR SHALL SUBMIT SHORING DESIGN AND ERECTION DRAWINGS TO MEET ALL STATE AND FEDERAL, AND OSHA REQUIREMENTS FOR REVIEW. THE SHORING SYSTEM SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER.
8. THE SHORING SHALL BE DESIGNED FOR WORKING LOADS SHOWN BELOW:

   A. WEIGHT OF CONCRETE (DEAD)..... 150 LBS/CF
   B. WEIGHT OF FORMWORK (DEAD)..... 10 LBS/SF
   C. CONSTRUCTION LOAD (LIVE)..... 30 LBS/SF MIN.
   D. DEAD + LIVE..... 100 LBS/SF MIN.
   E. ASCE 7 LOADS OR APPLICABLE LOCAL CODE (LIVE)..... 40–100+ LBS/SF
   F. USE OF MOTORIZED CARTS/BUGGIES (LIVE)..... 25 LBS/SF MIN.

   NOTE THAT "E" IS IN ADDITION TO "D", WHICH INCLUDES ITEMS "A–C". THEREFORE, TOTAL UNFACTORED LOAD = "D" + "E" (IF APPLICABLE) + "F" (IF APPLICABLE)

9. THE SHORING SYSTEM SHALL BE DESIGNED SO THAT THE CONCRETE MEMBERS UNDER REPAIR AND ADJACENT TO MEMBERS UNDER REPAIR DO NOT EXPERIENCE ANY DEFLECTION DURING THE CONSTRUCTION PHASE WHEN FULL/PARTIAL DEPTH CONCRETE IS REMOVED ALONG WITH REINFORCING BARS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WALL/COLUMN SHORING DESIGN, INSTALLATION, AND MAINTENANCE AT WALL/COLUMN REPAIRS AND LOCATIONS WHERE LATERAL SUPPORT IS PARTIALLY/FULLY REMOVED FROM THE EXISTING WALLS/COLUMNS DUE TO FLOOR SLAB AND BEAM REPAIRS.

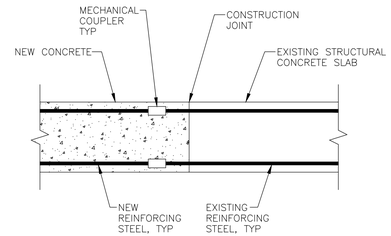
3 SHORING DETAILS/REQUIREMENTS FOR CONCRETE REPAIRS



NOTES:

1. FOR DOWEL DEVELOPMENT LENGTH AND BAR SPLICE LENGTHS, SEE GENERAL NOTES, DWG S0.01
2. FOR EMBEDMENT DEPTH, SEE DRAWINGS OR CONTACT MANUFACTURER.

4 DOWEL DETAIL



5 MECHANICAL COUPLER DETAIL

DESMAN

LIMITED SCOPE OF REPAIRS
AT THE
FIRST AVENUE GARAGE AND STATION
PITTSBURGH, PENNSYLVANIA

ISSUE

NO.	DESCRIPTION	DATE

DRAWING TITLE: REPAIR DETAILS

DRAWING NO. **S2.02**

SCALE: NONE
DATE: 05/03/24
PROJECT NO : 51–22130

DES.	DRWN.	CK'D.
MWR	DJC	MWR