

MICHIGAN STATE UNIVERSITY

PARKING RAMP 1 - SHAW LANE - MAINTENANCE

EAST LANSING, MICHIGAN

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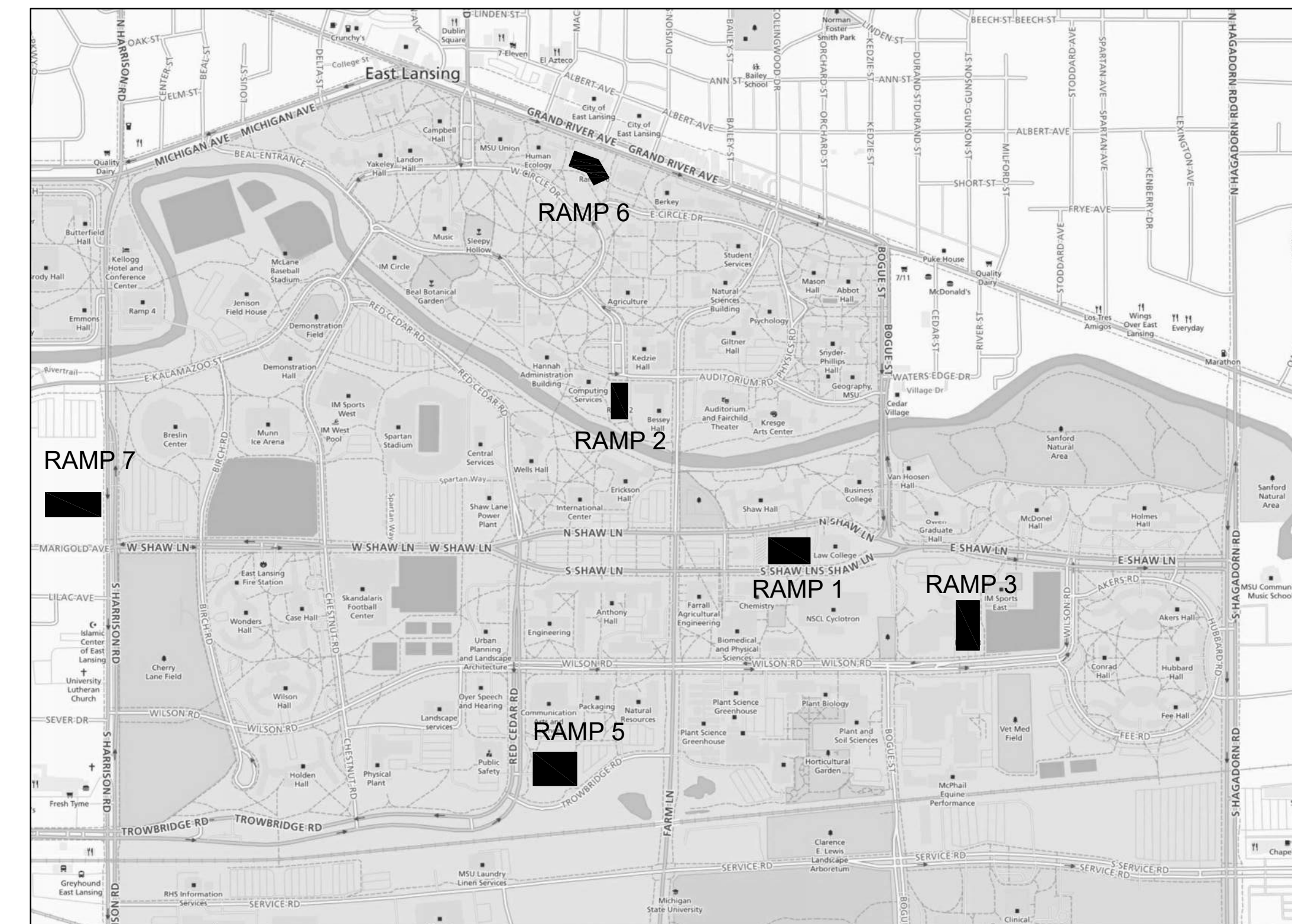
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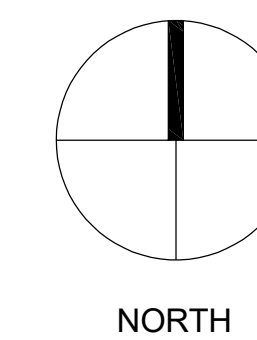
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LOCATION MAP



FOR BID AND CONSTRUCTION 3-11-2024

MICHIGAN STATE UNIVERSITY
 PARKING RAMP 1 - SHAW LANE - MAINTENANCE

CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

COVER SHEET

R-000

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GENERAL RESTORATION NOTES

A. CONSTRUCTION

- 1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE OF MICHIGAN, AND CITY OF EAST LANSING CODES AND ORDINANCES, INCLUDING FIRE CODES.
2. ALL MATERIAL PROPERTIES SHALL BE AS NOTED IN SPECIFICATIONS.
3. PRIOR TO FABRICATION OF ANY MATERIAL OR PLACEMENT OF CONCRETE, FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AS SHOWN ON DRAWINGS. REPORT ALL DISCREPANCIES IN THE FIELD TO ENGINEER IMMEDIATELY.
4. DO NOT SCALE DRAWINGS

B. CONSTRUCTION DOCUMENTS

- 1. CONSTRUCTION DOCUMENTS INCLUDES THESE DRAWINGS AND SEPARATELY BOUND SPECIFICATIONS FOR PURPOSES OF PERFORMING THE WORK, DRAWINGS AND SPECIFICATIONS SHALL BE A SINGLE UNIT.
2. DIMENSIONS SHOWN ON PLANS ARE BASED ON ORIGINAL CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS REQUIRED TO FIELD VERIFY ALL CONDITIONS FOR THE PURPOSES OF PREPARING THE BID IN PERFORMING THE WORK.
3. REFER TO SPECIFICATION SECTION 020010 FOR SCOPE, DESCRIPTION, AND REQUIREMENTS OF THE WORK.

C. DETAILS AND SYMBOLS

- 1. CLARIFICATION DETAILS DO NOT REPRESENT A SEPARATE PRICE ITEM. THESE DETAILS SUPPLEMENT THE BASIC DETAIL TO PROVIDE ADDITIONAL INFORMATION. IN SOME CASES THESE DETAILS SHOW VARIATIONS OF THE TYPICAL CONDITION.
2. WHEN THE WORK ITEM BUBBLE IS NOTED (TYP), IT MEANS THE WORK ITEM OCCURS AT ALL LOCATIONS WITH THE APPLICABLE DETERIORATION OR DESIGNATION SYMBOL OCCURS ON A PLAN.
3. WHERE (T. A. R.) IS NOTED IT MEANS THERE MAY BE AREAS OF THIS WORK IN ADDITION TO THE PARTICULAR DESIGNATED AREAS.
4. WHERE TWO OR MORE WORK ITEM BUBBLES ARE SHOWN GROUPED TOGETHER IT MEANS ANY OR ALL OF THE DESIGNATED WORK MAY BE APPLICABLE. COORDINATION OF WORK ITEMS IS THE CONTRACTOR'S RESPONSIBILITY.
5. WHEN WORK ITEM DETAILS ARE LISTED AS INCIDENTAL, THIS WORK IS INCLUDED IN THE PAYMENT OF THE OTHER WORK ITEM AND DOES NOT HAVE A SEPARATE PRICE.
6. WHEN THE DETAIL IS LABELED FOR REFERENCE ONLY IT PROVIDES INFORMATION ABOUT INCIDENTAL WORK AND DOES NOT HAVE A PAY UNIT.
7. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL EXTENT AND LOCATIONS OF REPAIR AREAS IN ACCORDANCE WITH THE SPECIFICATIONS; WORK ITEMS ARE SHOWN ONLY TO REPRESENT THE TYPES OF DETERIORATION.
8. SEE WORK ITEM SPECIFICATION FOR INFORMATION REGARDING DETAILS.

D. CONCRETE PROTECTION FOR REINFORCEMENT

- 1. THE FOLLOWING APPLIES FOR FULL SECTION CONCRETE REPLACEMENT OR PARTIAL DEPTH REPAIRS AS SHOWN ON THE DRAWINGS.
2. THE MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PER ACI 318-14, SECTION 7.7.
3. MINIMUM COVER FOR REINFORCING IN NON-PRESTRESSED CONCRETE AND NON-POST-TENSION MEMBERS.

Table with 2 columns: REINFORCEMENT TYPE, CONCRETE COVER (INCHES). Rows include SLAB TOP REINFORCEMENT, SLAB BOTTOM REINFORCEMENT, BEAM TOP REINFORCEMENT, BEAM STIRRUPS AT SIDES AND BOTTOM OF BEAM, BEAM STIRRUPS AT TOP OF BEAM, COLUMN TIES.

E. EPOXY COATING FOR REINFORCEMENT AND ANCHORS.

- 1. EPOXY COAT ALL REINFORCEMENT, EXCEPT WELDED WIRE REINFORCEMENT.

F. SHORING AND BRACING

- 1. CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SHEETING, ETC. REQUIRED FOR SAFETY AND PROPER EXECUTION OF THE WORK.
2. CONTRACTOR IS SOLELY RESPONSIBLE TO PREPARE SHOP DRAWINGS FOR BRACING ENSURING MEMBERS DESIGNED AND STAMPED/SEALED BY A REGISTERED PROFESSIONAL ENGINEER (REGISTERED IN THE STATE OF MICHIGAN) AND SUBMIT THEM TO THE ENGINEER FOR RECORD.

G. EXISTING SERVICES AND UTILITIES

- 1. CONTRACTOR SHALL REVIEW ALL EXISTING CONDITIONS TO DETERMINE ALL ELECTRICAL AND MECHANICAL SERVICES AND UTILITIES AFFECTED BY THE REPAIR WORK. MAKE ALL NECESSARY TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SERVICES TO ALL AREAS OF THE BUILDINGS OR OTHER AREAS (NOT IN CONTACT) AFFECTED BY THE WORK. THE CONTRACTOR SHALL SUBMIT THE METHODS AND SCHEDULE TEMPORARY CONNECTIONS FOR THE OWNER'S APPROVAL PRIOR TO COMMENCEMENT.

H. CONSTRUCTION PHASING, SEQUENCING AND TRAFFIC MAINTENANCE

- 1. WORK SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE OR ALL IDENTIFIED PROJECT REPRESENTATIVES.
2. THE OWNER WILL CONTINUE TO USE EACH STRUCTURE DURING CONSTRUCTION. CONTRACTOR MUST PHASE AND ARRANGE WORK SO AS TO MAINTAIN ACCESS AT ALL TIMES TO ALL AREAS THAT ARE NOT UNDER CONSTRUCTION FOR BOTH VEHICLES AND PEDESTRIANS.

I. CONCRETE REINFORCEMENT REQUIREMENTS SEE SECTION 020010 FOR SPECIFIC USES.

- 1. CAST IN PLACE CONVENTIONAL CONCRETE
a. COMPRESSIVE STRENGTH 5000 PSI AT 28 DAYS (2500 @3 DAYS)
b. WATER - CEMENT RATIO 0.40 MAX
c. MAX. SIZE AGGREGATE 1/2 INCH
d. SLUMP (MAXIMUM) 6" WITH SUPER PLASTICIZER (AFTER WATER REDUCER ADDITION)
e. AIR CONTENT 7% ± 1-1/2%
f. CEMENTITIOUS MATERIAL CONTENT 580 LB/C.Y. MIN.
MAXIMUM PERMISSIBLE CEMENTITIOUS CONTENT
a. FLY ASH: 25%
b. SLAG: 50%
c. FLY ASH & SLAG: 50%

- 2. NOTE: Cementitious material includes cement, silica fume, and fly ash (if permitted).

J. GENERAL P-T TENDON REPAIR NOTES:

- 1. TENDONS ARE NEAR THE FLOOR SURFACE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING SAWCUTTING AND REMOVALS SO AS NOT TO DAMAGE EXISTING TENDONS OR TENDON SHEATHS. TENDONS MAY BREAK WITH EXPLOSIVE FORCE DURING REMOVALS OR WHEN CUT. CHIPPING WITH 15LB. HAMMERS SHALL BE USED IN LIEU OF SAWCUTTING NEAR SHALLOW TENDONS.
2. CAUTION IS REQUIRED WHEN PERFORMING CONCRETE REMOVALS. ELEVATIONS OF P-T TENDONS IN BEAMS VARY. COORDINATE INSPECTION OF EXPOSED TENDONS FOLLOWING CONCRETE REMOVALS.
3. THE SLAB MAY CONTAIN LIVE EMBEDDED ELECTRICAL CONDUIT. DAMAGE TO CONDUITS DURING DEMOLITION IS TO BE REPAIRED AT THE COST OF THE CONTRACTOR.
4. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE FOLLOWING:
a. TRAINING AND MONITORING HIS WORK FORCE CONCERNING THE SAFETY PROCEDURES THAT SHOULD BE EMPLOYED IN THE EXECUTION OF THIS WORK.
b. MAINTAINING STABILITY OF THE STRUCTURE AND ELEMENTS WITHIN THE STRUCTURE, DURING REPAIR WORK, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF SHORING AND BRACING.

- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AVAILABLE ORIGINAL DRAWINGS. REVIEW ORIGINAL DRAWINGS AND COORDINATE REPAIR PROCEDURES PRIOR TO PROCEEDING WITH THE WORK. REPRESENTATIVE LOCATIONS OF EXISTING P-T TENDONS AND ANCHORS ARE SHOWN. EXACT LOCATIONS SHALL BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO CONCRETE REMOVALS. EXISTING REINFORCING STEEL IS NOT SHOWN ON THE REPAIR DETAILS (UNO). DO NOT CUT ANY REINFORCING, UNLESS DIRECTED BY ENGINEER IN WRITING.

- 6. P-T REPAIRS AND DE-TENSIONING PROCEDURES SHALL BE REVIEWED AT PRECONSTRUCTION OR PREINSTALLATION MEETING. NO DEVIATION FROM WRITTEN, AGREED-UPON PROCEDURES WILL BE ALLOWED UNLESS DIRECTED IN WRITING BY THE ENGINEER. AS A MINIMUM DURING DETENSIONING OPERATIONS, CLOSE ALL FLOOR SPANS INCLUDING LEVEL BELOW, BEING DETENSIONED, TO PREVENT INJURY IN THE EVENT OF A TENDON POPPING OUT OF THE SLAB.

- 7. NOT ALL TENDON FAILURES ARE IN AREAS OF FLOOR DELAMINATION. PERFORM REMOVAL OF ALL SOUND CONCRETE AS REQUIRED TO EXPOSE TENDONS AND ANCHORS.

- 8. MAINTAIN ORIGINAL TENDON PROFILES WITHIN CONCRETE REMOVAL AREAS. DO NOT REMOVE CONCRETE BELOW TENDONS UNLESS REQUIRED FOR SPLICING REPAIRS OR TO REPLACE DAMAGED SHEATHING.

- 9. TENDONS MAY OCCUR INDIVIDUALLY OR BUNDLED.

- 10. DO NOT DAMAGE TENDONS IN REPAIR AREA. CONTRACTOR-CAUSED DAMAGE TO TENDONS SHALL BE REPAIRED AS DIRECTED BY ENGINEER AT NO COST TO OWNER.

- 11. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF FAILED OR DAMAGED P/T TENDONS ARE DISCOVERED DURING REMOVALS. ALL P-T REPAIRS SHALL BE REVIEWED BY ENGINEER PRIOR TO COMMENCING WORK RELATED TO THE P-T REPAIR.

- 12. CONTRACTOR SHALL LIMIT REPAIR OPENING SIZE TO MINIMUM SIZE REQUIRED TO PERFORM REPAIRS. EXCESS REMOVALS WILL NOT BE COVERED BY WORK ITEM 3.1.

J. ELECTRICAL CAUTIONARY NOTES

- 1. UNKNOWN IF SLAB CONTAINS EMBEDDED ELECTRICAL CONDUIT. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID CUTTING/DAMAGING CONDUIT. IF CONDUIT IS DAMAGE AS RESULT OF CONSTRUCTION OPERATIONS NOTIFY OWNER AND ENGINEER IMMEDIATELY. CONDUIT DAMAGE BY CONSTRUCTION OPERATION SHALL BE REPAIRED BY CONTRACTOR NO COST OWNER. DAMAGED CONDUIT THAT IS NOT A RESULT OF CONSTRUCTION OPERATIONS SHALL BE REPAIRED/REPLACED PER ELECTRICAL ALLOWANCE.

L. PHASING INSTRUCTION AND NOTES

1. DEFINITIONS

- a. CONSTRUCTION PHASING, SEQUENCING AND TRAFFIC MAINTENANCE WORK SEQUENCE SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND ALL IDENTIFIED PROJECT REPRESENTATIVES. OWNER WILL CONTINUE TO USE STRUCTURE DURING RESTORATION CONSTRUCTION. CONTRACTOR MUST PHASE AND ARRANGE WORK SO AS TO MAINTAIN ACCESS AT ALL TIMES TO AREAS THAT ARE NOT UNDER CONSTRUCTION FOR BOTH VEHICLES AND PEDESTRIANS.
b. PROTECTION ZONE: THIS IS AN AREA THAT IS TAKEN OUT OF SERVICE AND ISOLATED FROM THE GARAGES NORMAL PEDESTRIAN AND VEHICULAR CIRCULATION TO PROTECT THE PATRONS FROM HAZARDS RESULTING FROM WORK BEING PERFORMED ABOVE. WORK THAT REQUIRES PROTECTION ZONES SHALL INCLUDE SHOT BLAST/SEALER APPLICATION, CONCRETE DEMOLITION, CONCRETE PLACEMENT, CEILING REMOVAL/SURFACE PREP, WELDING AND SEALANT REPLACEMENT.
c. WORK ZONE: THIS IS AN AREA THAT IS CAPTURED FOR THE PURPOSE OF PERFORMING PROJECT RELATED WORK ITEMS. THE AREA SHALL BE BARRICADED TO PREVENT GARAGE PATRONS/VEHICLES FROM ENTERING/PARKING WHILE CONTRACTORS IN CONTROL OF THE AREA.
d. WORK PHASE AREA: THIS INCLUDES ALL AREAS AFFECTED BY A PARTICULAR PHASE INCLUDING THE WORK ZONE, PROTECTION ZONE, AND THEIR USE FOR TEMPORARY PEDESTRIAN AND VEHICLE CIRCULATION.
e. PROTECTION PARTITION/BARRICADES: THIS DESCRIBES THE BARRICADES AND PROTECTION ENCLOSURES THAT WILL BE INSTALLED AROUND THE WORK AND PROTECTION ZONES TO KEEP GARAGE PATRONS AND THEIR VEHICLES OUT OF THOSE RESPECTIVE AREAS. IN ADDITION THESE ELEMENTS MUST KEEP DUST AND OTHER CONSTRUCTION RELATED DEBRIS FROM MIGRATING IN THE OCCUPIED AREAS OF THE GARAGE.

2. PHASING

- a. PARKING RAMP SHALL REMAIN OPERATIONAL AT ALL TIMES. FOR BIDDING PURPOSES, PHASING RESTRICTIONS ARE AS FOLLOWS:
a.a. FOR TRAFFIC TOPPING REPAIR AND RE-COATING WORK (WORK ITEM SERIES 16), THE CONTRACTOR MAY OCCUPY ONE FULL LEVEL OF ONE STRUCTURE AT A TIME. THE CONTRACTOR SHALL MAINTAIN A VEHICULAR PATHWAY THROUGH THE CLOSURE AREA AS NECESSARY TO MAINTAIN ACCESS TO AREAS OF THE RAMP.
a.b. THE CONTRACTOR MAY OCCUPY UP TO 50 PARKING STALLS AT A TIME IN EACH STRUCTURE TO PERFORM ALL OTHER WORK WHILE THE GARAGE IS OPERATING.
a.c. THE CONTRACTOR SHALL COORDINATE ALL CLOSURES WITH THE OWNER AND ENGINEER. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED BEFORE CHANGING OF PHASES AND/OR OCCUPYING ANY RESERVED PARKING SPACE.
a.d. THE ACTUAL NUMBER OF SPACES TAKEN OUT OF SERVICE AT ANY ONE TIME WILL VARY DEPENDING UPON THE AREA EVENT SCHEDULE AND INDIVIDUAL RAMP PARKING DEMAND.
b. PHASING SHALL BE AS SCHEDULED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER/OWNER.
c. THE CONTRACTOR SHALL PROVIDE UNOBSTRUCTED PEDESTRIAN ACCESS (PROTECTED WHEN NECESSARY) TO ALL EMERGENCY EGRESS STAIRS AT ALL TIMES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN SIGNAGE THAT CLEARLY DIRECTS PATRONS TO AND FROM THESE DESTINATIONS. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY LIGHTING FOR THESE PATHS IN THE EVENT THE GARAGE LIGHTING IS BLOCKED OR REDUCED BY PROJECT RELATED WORK.
d. IT SHALL BE THE OWNER OR HIS AGENT'S RESPONSIBILITY TO CLEAR WORK PHASE AREA OF VEHICLES. THE CONTRACTOR SHALL WORK IN UNISON WITH THE CLEARING OPERATION TO CAPTURE THE AREAS BY INCREMENTALLY INSTALLING BARRICADES TO PREVENT VEHICLES FROM REENTERING THE AREA AS IT IS CLEARED. IN ADDITION TEMPORARY SIGNAGE SHALL BE INSTALLED AND ADJUSTED BY THE CONTRACTOR DURING THE WORK. PROTECTION ZONE CAPTURE EFFORT. NOTE THAT NEW AREAS CANNOT BE CAPTURED PRIOR TO WORK ZONES OR PORTIONS THEREOF BEING RETURNED TO SERVICE SO THAT THE MAXIMUM LIMIT FOR SPACES OUT OF SERVICE SHALL NOT BE EXCEEDED. ALLOW 24 HOURS BETWEEN RETURNING SPACES TO SERVICE AND OCCUPYING EQUAL NUMBER OF SPACES FOR THE NEXT PHASE OF WORK.
e. BARRICADES SHALL BE OF SUFFICIENT CONSTRUCTION TO PREVENT INADVERTENT ACCESS BY PATRON VEHICLES AND PEDESTRIANS. THE BARRICADES CAN BE INCORPORATED INTO THE WORK ZONE PROTECTION THAT ARE INTENDED TO PREVENT THE ESCAPE OF DUST AND OTHER DEBRIS FROM THE WORKS ZONE.
f. THE FOLLOWING PARAMETERS SHALL BE CONSIDERED WHEN DEVELOPING PHASING PLANS.

- 1. PEDESTRIAN PATH WIDTH (MINIMUM): 6'-0"
2. PEDESTRIAN PATH HEADROOM (MINIMUM): 7'-0"
3. TEMPORARY VEHICLE ONE - WAY TRAVEL (MINIMUM): 12'-0"
*ADD 2'-0" TO THE LANE DIMENSION IN TURNING AREAS.
4. TEMPORARY VEHICLE HEADROOM HEIGHT: AS POSTED AT GARAGE ENTRANCE.

- b. CONTRACTOR SHALL BE RESPONSIBLE TO LOCKOUT STAIR ACCESS INTO WORK PHASE, AND AREAS UNDER CONSTRUCTION TO PREVENT UNAUTHORIZED PATRON ACCESS. DOOR SHALL BE SEALED OFF TO PREVENT AIRBORNE DUST FROM ENTERING INTO STAIRWAYS AND ELEVATOR SHAFTS.

M. MISCELLANEOUS NOTES

- a. OWNER AND THE ENGINEER RESERVE THE RIGHT TO ISSUE A STOP WORK ORDER FOR SPECIFIC AREAS/WORK ITEMS IF IN THE OPINION OF EITHER ONGOING WORK DOES NOT MEET THE PHASING PARAMETERS OF THE PROJECT OR PRESENT HAZARDS TO THE PATRONS OF THE GARAGE. CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION. WORKS ZONE SHALL NOT BE RETURNED TO SERVICE IF HAZARDOUS CONDITIONS ARE PRESENT.
c. DO NOT RETURN AREAS TO SERVICE UNLESS EXISTING STRIPING AFFECTED BY WORK HAS BEEN RESTORED OR NEW STRIPING HAS BEEN APPLIED.

N. ABBREVIATIONS

Table of abbreviations: APPROX = APPROXIMATELY, AGG = AGGREGATE, BM = BEAM, BOT = BOTTOM, CIP = CAST IN PLACE, CJ = CONSTRUCTION JOINTS/CONTROL JOINTS, CLR = CLEARANCE, COL = COLUMN, CONC = CONCRETE, DET = DETAIL, EA = EACH, EJ = EXPANSION JOINT, EXIST = EXISTING, FIN = FINISHED, FL = FLOOR, IN = INCHES, INC = INCIDENTAL, LF = LINEAR FOOT, LS = LUMP SUM, LVL = LEVEL, MAX = MAXIMUM, MIN = MINIMUM, NA = NOT APPLICABLE, OC = ON CENTER, OH = OPPOSITE HAND, P/C = PRECAST, RC = REFLECTED CEILING, REINF = REINFORCEMENT, REQ'D = REQUIRED, SF = SQUARE FOOT, SIM = SIMILAR, SOG = SLAB ON GRADE, SPEC = SPECIFICATION, SUPT = SUPPORTED, TAR = TYPICAL AS REQUIRED, UN OR UNO = UNLESS NOTED OTHERWISE, WI = WORK ITEM, WWR = WELDED WIRE REINFORCEMENT

RAMP #2 (AUDITORIUM) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, FLOOR REPAIR - PARTIAL DEPTH, FLOOR REPAIR - FULL DEPTH, FLOOR REPAIR - CURBS / WALKS, FLOOR REPAIR - PARTIAL DEPTH TEST OPENING, FLOOR REPAIR - STAR NOSING, FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH, CEILING REPAIR - PARTIAL DEPTH, STAIR CEILING REPAIR - PARTIAL DEPTH, BEAM REPAIR - PARTIAL DEPTH, COLUMN REPAIR - PARTIAL DEPTH, WALL REPAIR - PARTIAL DEPTH, JOINT SEALANTS, RAIL PLATE SEALANT, TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM, PROTECT EXPOSED PIT TENDONS, TENDON SPLICE COUPLING (CENTER PULL), TENDON SPLICE COUPLING (DOUBLE), PIT TENDON MATERIAL, MECHANICAL - INSTALL UTILITY COVER PLATES, RAILING REPAIR, REPLACE RAILING ANCHORS, PAINT DOORS AND FRAMES, PAINT EXPOSED FIRE SUPPRESSION SYSTEM, PAINT RAILING, INSTALL NEW WEEP HOLES, TUCKPOINTING, REMOVE AND REPLACE BRICK, REMOVE AND REPLACE CMU.

RAMP #5 (COMM ARTS) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH, COLUMN REPAIR - PARTIAL DEPTH, EXPANSION JOINT - ELASTOMERIC CONCRETE - REPLACE, EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR, EPOXY INJECTION, COVE SEALANTS.

RAMP #6 (GRAND RIVER) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, GRIND SLAB EDGE, FLOOR REPAIR - PARTIAL DEPTH, FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH, EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR, JOINT SEALANT, TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM, GATE REPAIR, PAINT DOORS AND FRAMES, WINDOW GLAZING - SILICONE.

RAMP #3 (WHARTON CENTER) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, FLOOR REPAIR - PARTIAL DEPTH, FLOOR REPAIR - CURBS / WALKS, FLOOR REPAIR - STAR NOSING, FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH, FLOOR REPAIR - SLAB-ON-GRADE RE-SLOPE SLAB, CEILING REPAIR - PARTIAL DEPTH, BEAM REPAIR - PARTIAL DEPTH, COLUMN REPAIR - PARTIAL DEPTH, WALL REPAIR - PARTIAL DEPTH, EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR, ROUT AND SEAL CRACKS, COLUMN TO WALL JOINT SEALANT, COVE SEALANTS, TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM, PAINT EXPOSED FIRE SUPPRESSION SYSTEM, METAL FLASHING REPAIR, TUCKPOINTING, REMOVE AND REPLACE BRICK, REMOVE AND REPLACE CMU.

RAMP #7 (HARRISON) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, GRIND SLAB EDGE, FLOOR REPAIR - PARTIAL DEPTH, FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH, WALL REPAIR - PARTIAL DEPTH, TEE FLANGE REPAIR - FULL DEPTH, EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR, ROUT AND SEAL CRACKS, JOINT SEALANTS, TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM.

RAMP #1 (SHAW LANE) WORK ITEM TABLE

Table with 4 columns: WORK ITEM, DESCRIPTION, UNITS, BID QUANTITY. Rows include PROJECT MOBILIZATION, CONCRETE FORMWORK, CONCRETE SHORES AND RESHORES, CONCRETE REINFORCEMENT, TEMPORARY SIGNAGE, FLOOR REPAIR - GROUT POCKET CONNECTION, FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH, CEILING REPAIR - PARTIAL DEPTH, STAIR CEILING REPAIR - PARTIAL DEPTH, BEAM REPAIR - PARTIAL DEPTH, EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR, RE-ANCHOR TRAFFIC PLATE, SHEAR TRANSFER ANGLES - REPLACE PADS, WALL PANEL JOINT SEALANT, COVE SEALANT REPLACEMENT - WIDE, TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM, TRAFFIC TOPPING - RECOAT - FULL SYSTEM, RAILING REPAIR, PAINT TRAFFIC MARKINGS, PAINT ROOF COLUMN CAUTION STRIPE, METAL FLASHING REPAIR.



650 Trade Centre Way
Suite 325
Portage, MI 49002
269.381.6090 Ph
www.walkerconsultants.com

MICHIGAN STATE UNIVERSITY
Infrastructure Planning and Facilities

MICHIGAN STATE UNIVERSITY
PARKING RAMP 1 - SHAW LANE - MAINTENANCE

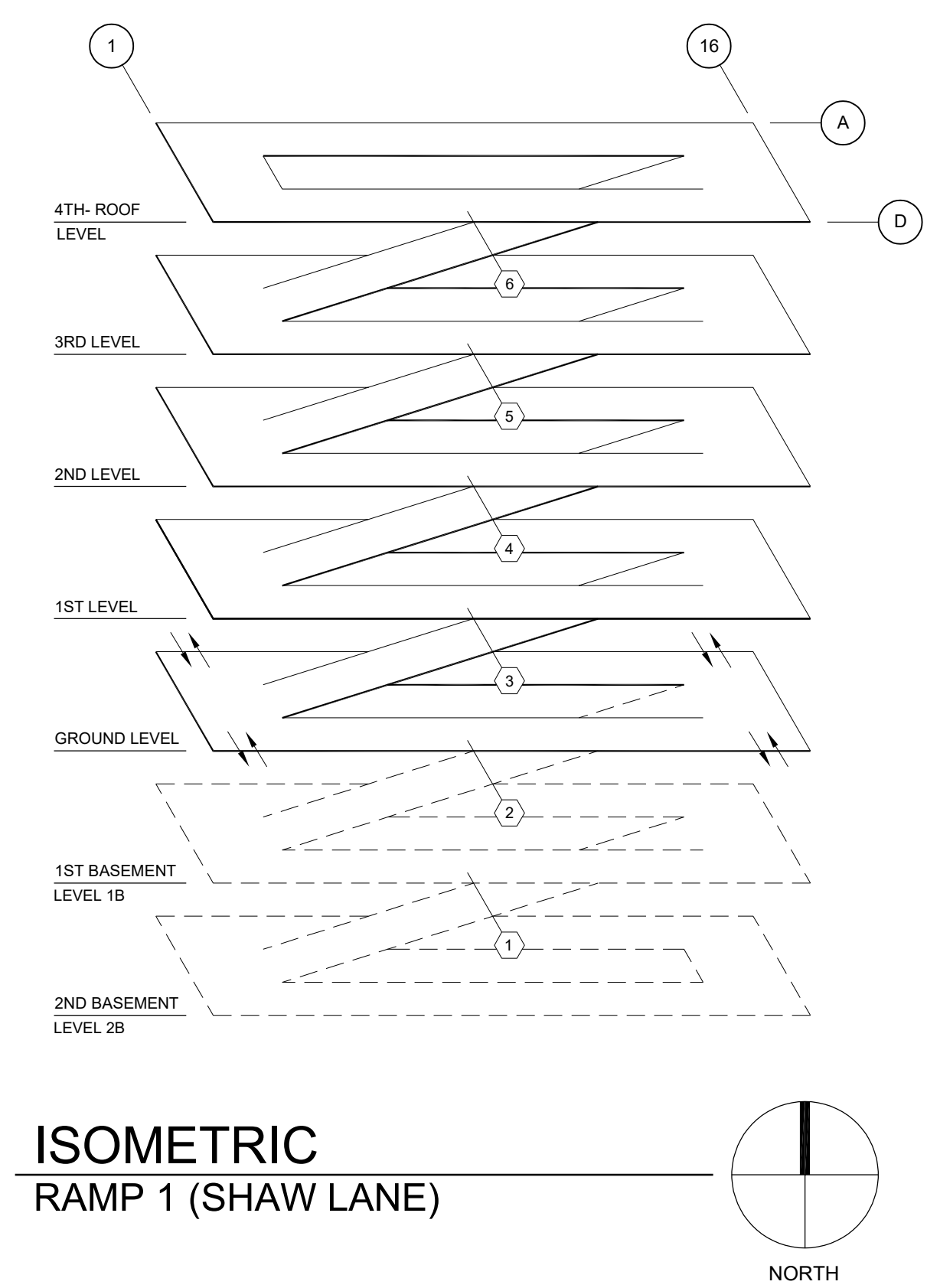
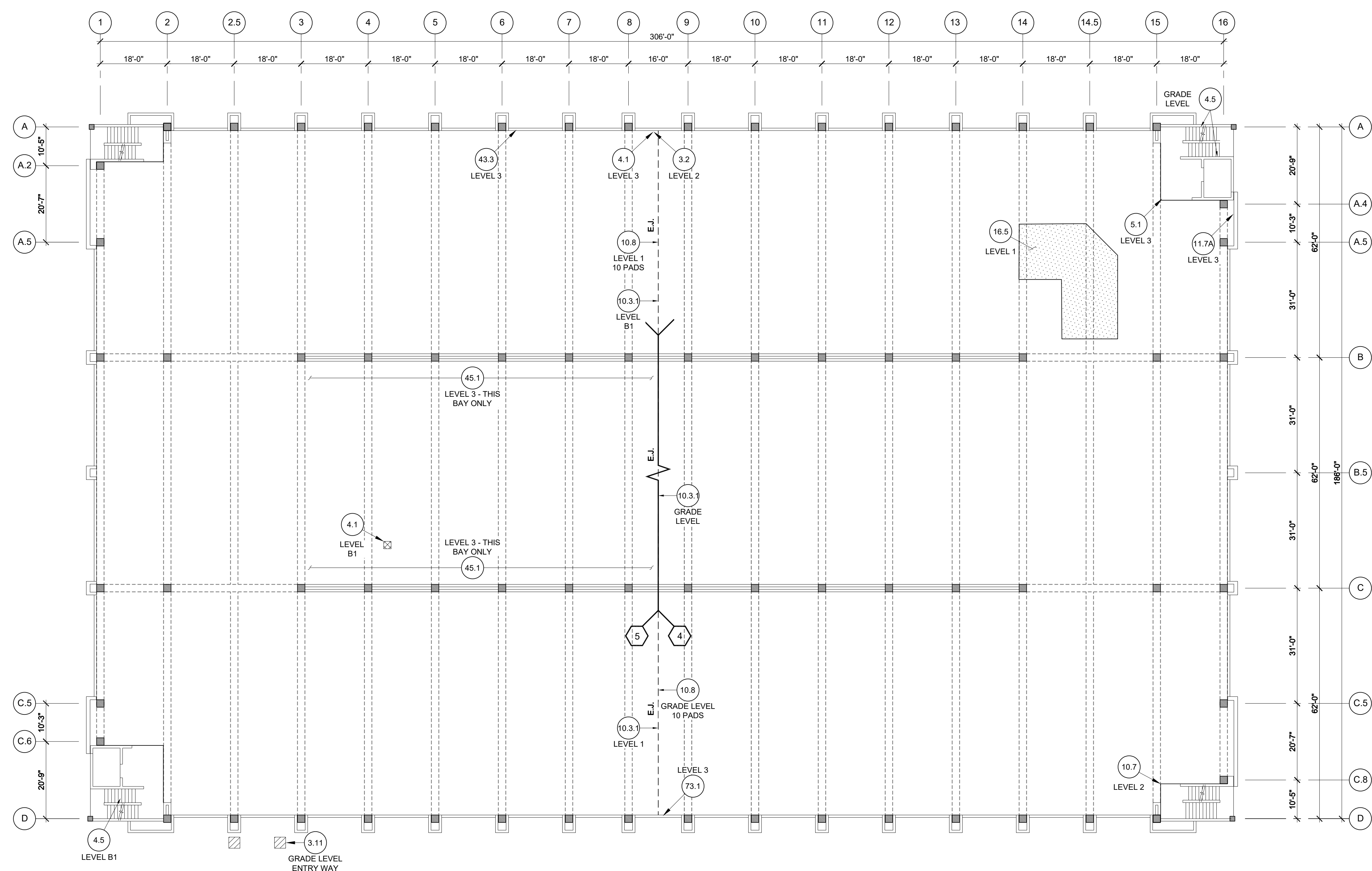
CAPITAL PROJ. NO.
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Table with 2 columns: CATEGORY, VALUE. Rows include LEAD, ARCH, MECH, ELEC, CIVIL, L.A., REP, APPR, DATE, SCALE, REVISIONS.

GENERAL NOTES

R-001
2 OF 20

J:\MICHIGAN\20-002553-00-MSU_2024_PS_RAMP_RPRACA\0-002553-R001.DWG 1/25/2024 10:05:30 AM TYLER, JOSH



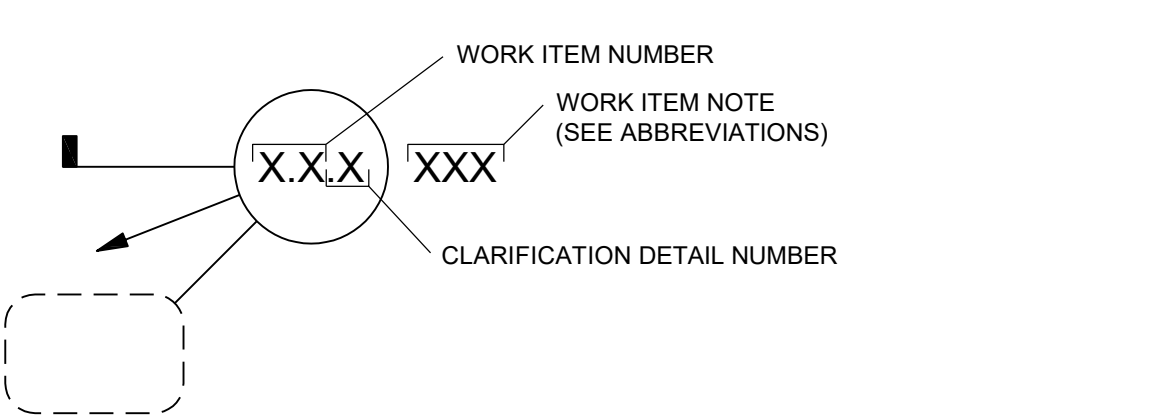
1 TYPICAL LEVEL PLAN
 RAMP 1 (SHAW LANE)
 SCALE: 1/16" = 1'-0"
 NORTH

SHEET NOTES:

- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
- COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.
- CONTRACTOR SHALL FURNISH AND APPLY PAINT / CONCRETE STAIN, APPROVED BY ENGINEER, TO ALL VERTICAL AND OVERHEAD CONCRETE REPAIRS, INCIDENTAL. COATINGS SHALL NOT BE APPLIED UNTIL REPAIR LOCATIONS HAVE APPROPRIATELY CURED.
- WORK ITEM 16.1: AT ALL CONCRETE FLOOR SLAB REPAIRS (WORK ITEM SERIES 3.0 AND 4.0) CONTRACTOR SHALL INSTALL FULL SYSTEM TRAFFIC TOPPING, INCIDENTAL TO CONCRETE WORK. COATING SHALL NOT BE APPLIED UNTIL REPAIR LOCATIONS HAVE APPROPRIATELY CURED.

LEGEND:

- [Hatched Box] = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- [Cross-hatched Box] = WI 4.1, 4.5 - CEILING REPAIR
- [White Box] = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM

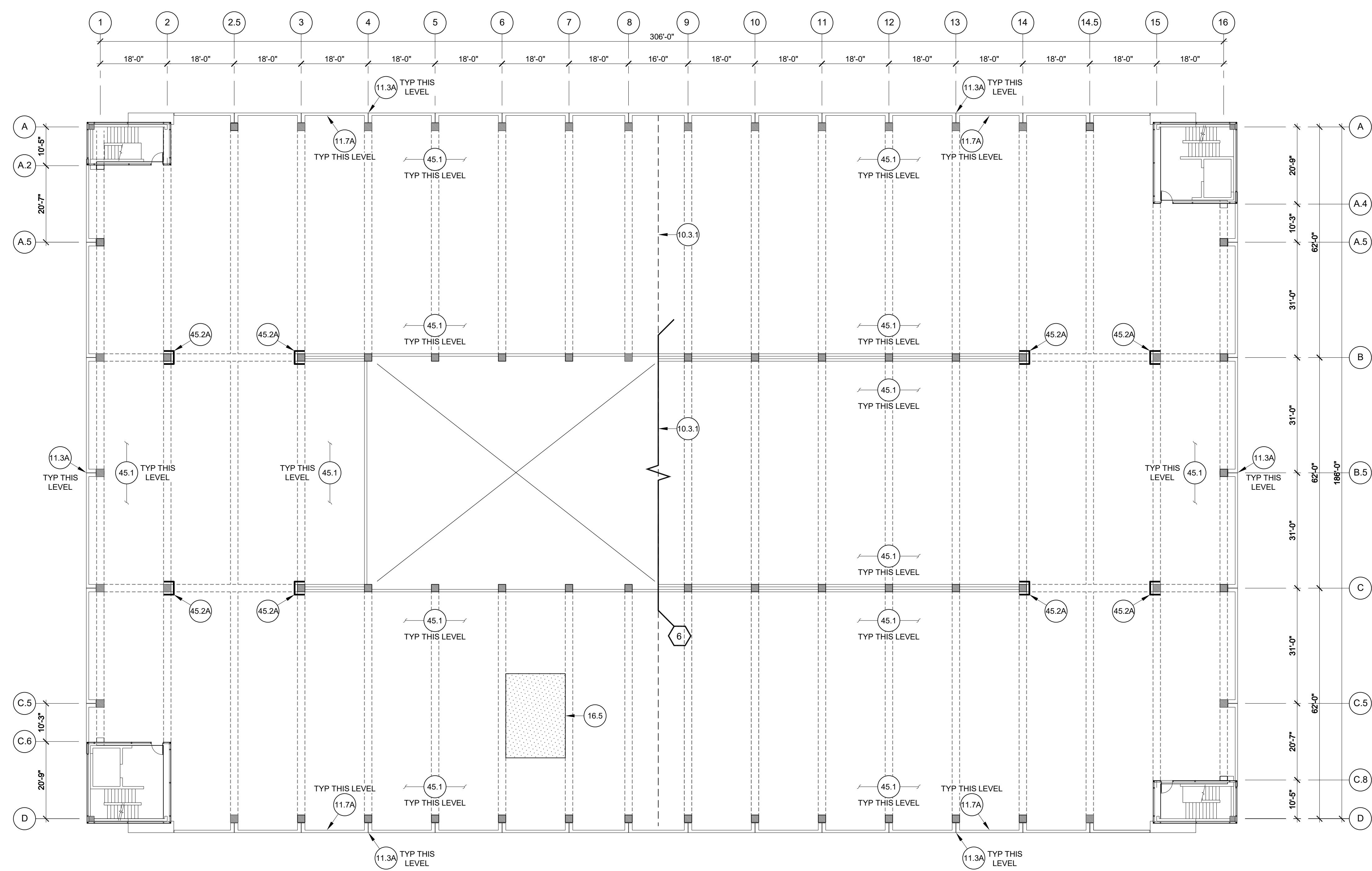


- NOTES:**
- NOT ALL WORK ITEMS HAVE DETAILS.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RAMP #1 (SHAW LANE) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
32	FLOOR REPAIR - GROUT POCKET CONNECTION	LS	1
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	30
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	10
4.5	STAIR CEILING REPAIR - PARTIAL DEPTH	SF	20
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	50
10.7	RE-ANCHOR TRAFFIC PLATE	EA	1
10.8	SHEAR TRANSFER ANGLES - REPLACE PADS	EA	20
11.3A	WALL PANEL JOINT SEALANT	LF	170
11.7A	COVE SEALANT REPLACEMENT - WIDE	LF	590
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
16.5	TRAFFIC TOPPING - RECOAT - FULL SYSTEM	SF	660
43.3	RAILING REPAIR	LF	1
45.1	PAINT TRAFFIC MARKINGS	LS	1
45.2A	PAINT ROOF COLUMN CAUTION STRIPE	LS	1
73.1	METAL FLASHING REPAIR	EA	1

CAUTION NOTE:
 THE FLOOR SLAB HAS POST-TENSIONING TENDONS. THESE TENDONS ARE NEAR THE FLOOR SURFACE AT SPALLS AND DELAMINATIONS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN SAW-CUTTING SO AS NOT TO DAMAGE EXISTING TENDONS OR TENDON SHEATHS. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. CHIPPING WITH 15 LB HAMMERS SHALL BE USED IN LIEU OF SAW-CUTTING NEAR SHALLOW TENDONS.



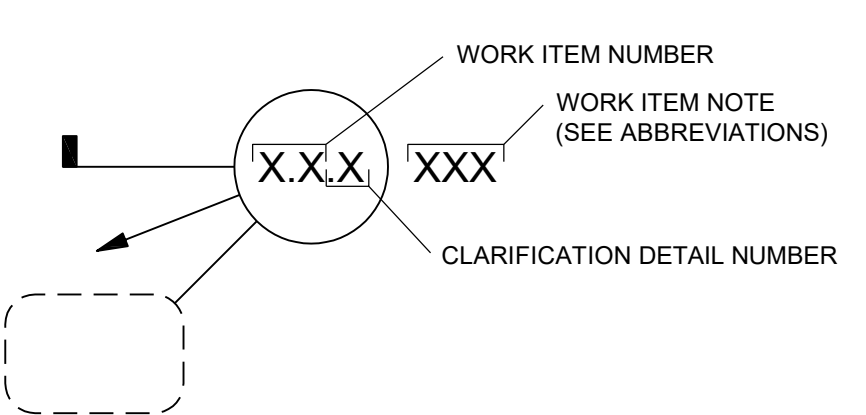
**1 LEVEL 4 PLAN
 RAMP 1 (SHAW LANE)**
 SCALE: 1/16" = 1'-0"
 NORTH

SHEET NOTES:

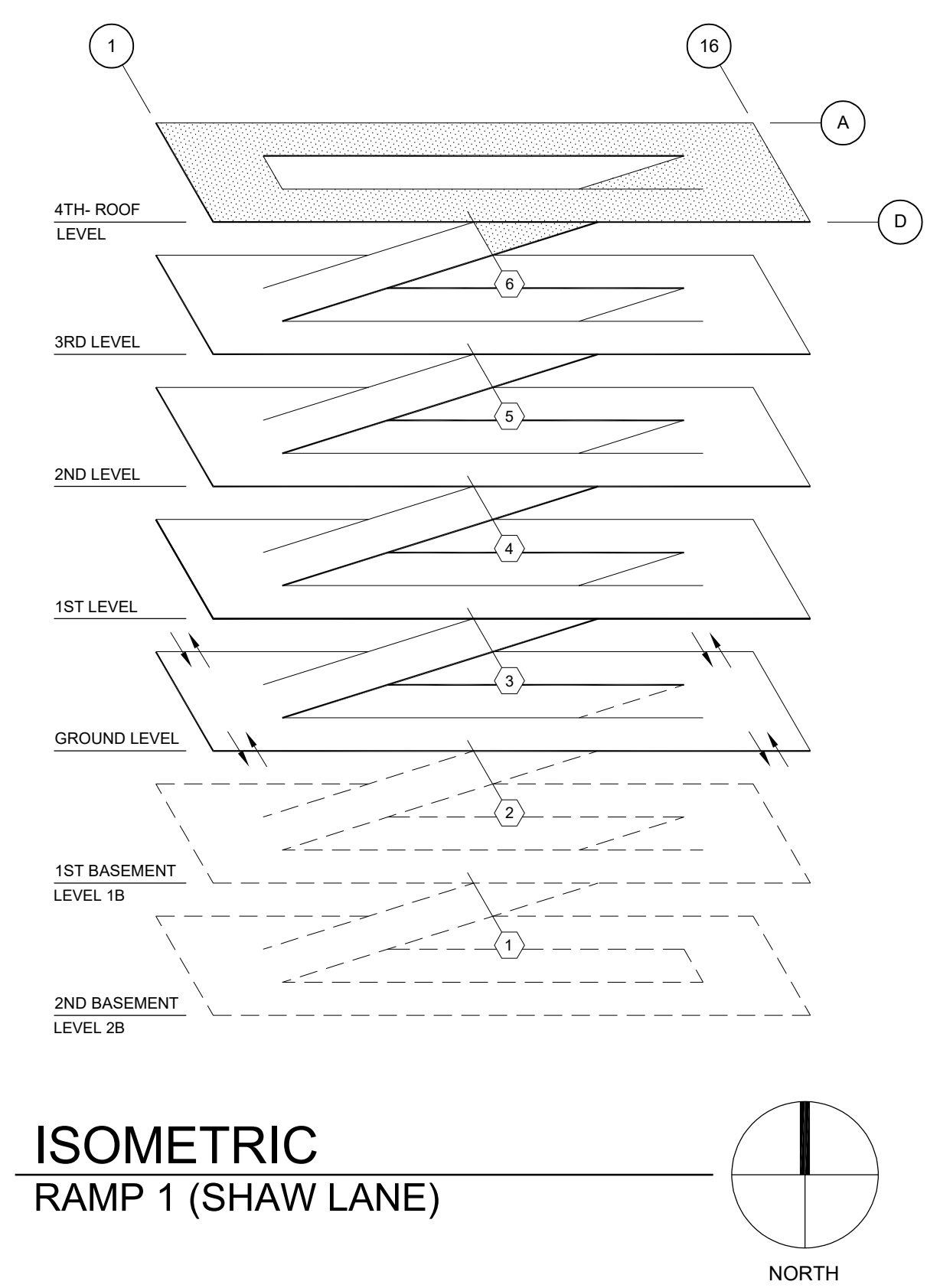
- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
- COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
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LEGEND:

- [Hatched Box] = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- [Cross-hatched Box] = WI 4.1, 4.5 - CEILING REPAIR
- [White Box] = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
- NOT ALL WORK ITEMS HAVE DETAILS.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



**ISOMETRIC
 RAMP 1 (SHAW LANE)**

RAMP #1 (SHAW LANE) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
32	FLOOR REPAIR - GROUT POCKET CONNECTION	LS	1
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	30
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	10
4.5	STAIR CEILING REPAIR - PARTIAL DEPTH	SF	20
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	50
10.7	RE-ANCHOR TRAFFIC PLATE	EA	1
10.8	SHEAR TRANSFER ANGLES - REPLACE PADS	EA	20
11.3A	WALL PANEL JOINT SEALANT	LF	170
11.7A	COVE SEALANT REPLACEMENT - WIDE	LF	590
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
16.5	TRAFFIC TOPPING - RECOAT - FULL SYSTEM	SF	660
43.3	RAILING REPAIR	LF	1
45.1	PAINT TRAFFIC MARKINGS	LS	1
45.2A	PAINT ROOF COLUMN CAUTION STRIPE	LS	1
73.1	METAL FLASHING REPAIR	EA	1

CAUTION NOTE:
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CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 1
 LEVEL 4 PLAN

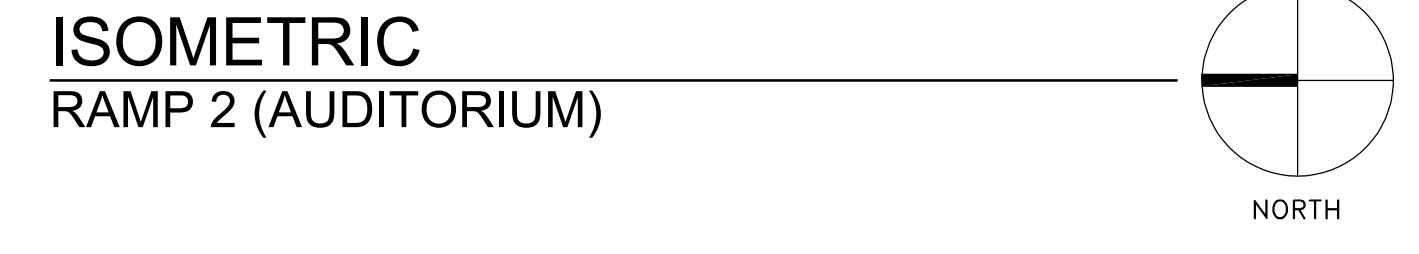
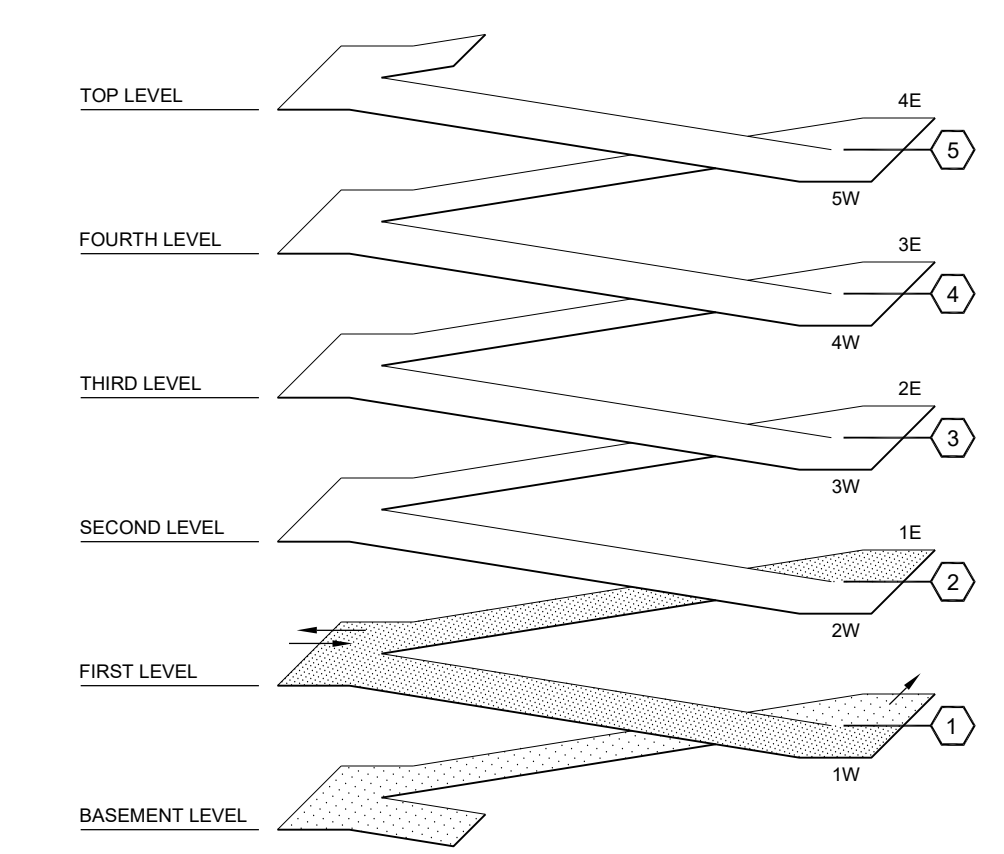
R-112

CAPITAL PROJ. NO.
CP23098

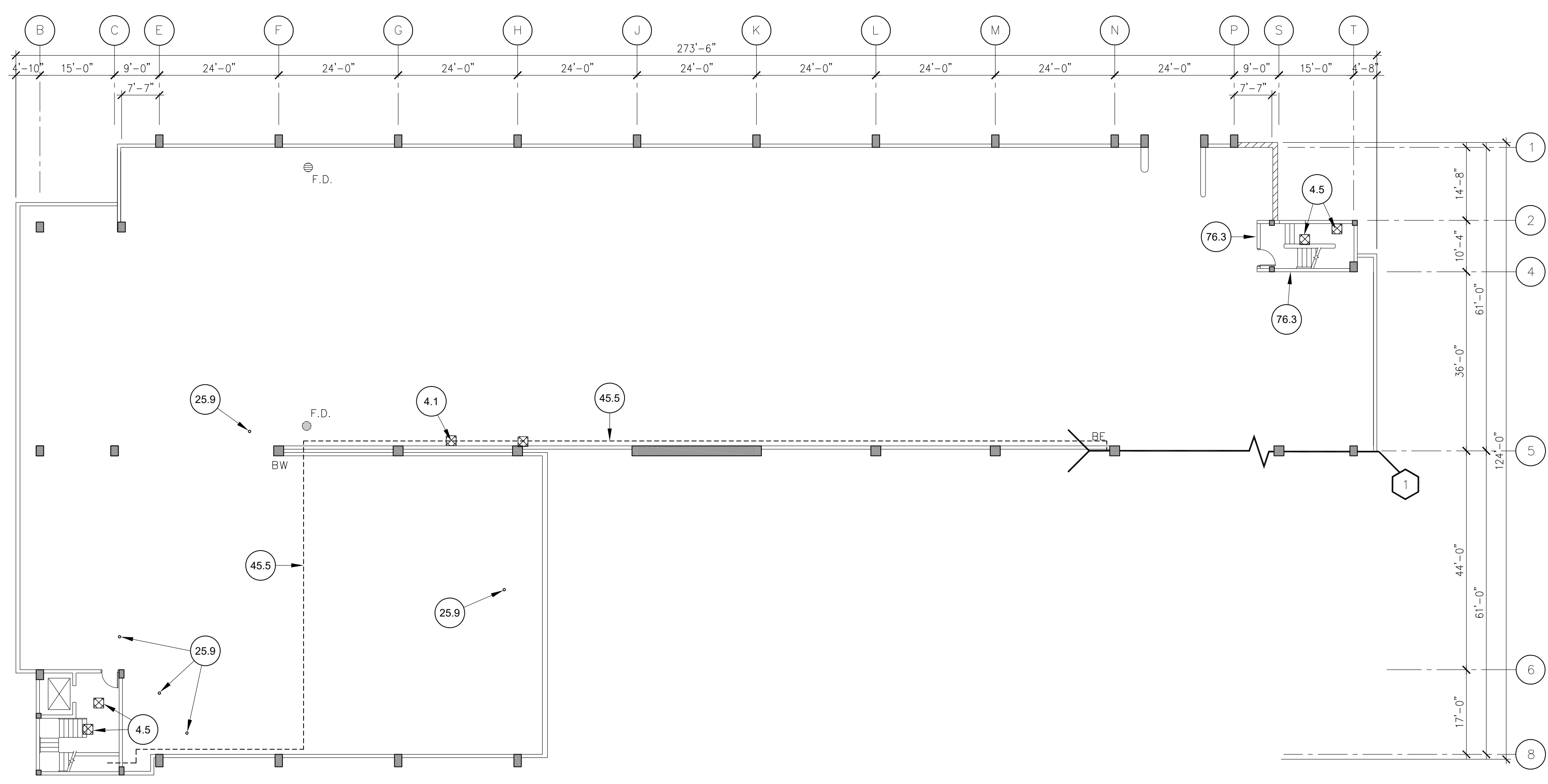
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MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 2
BASEMENT & LEVEL 1 PLANS

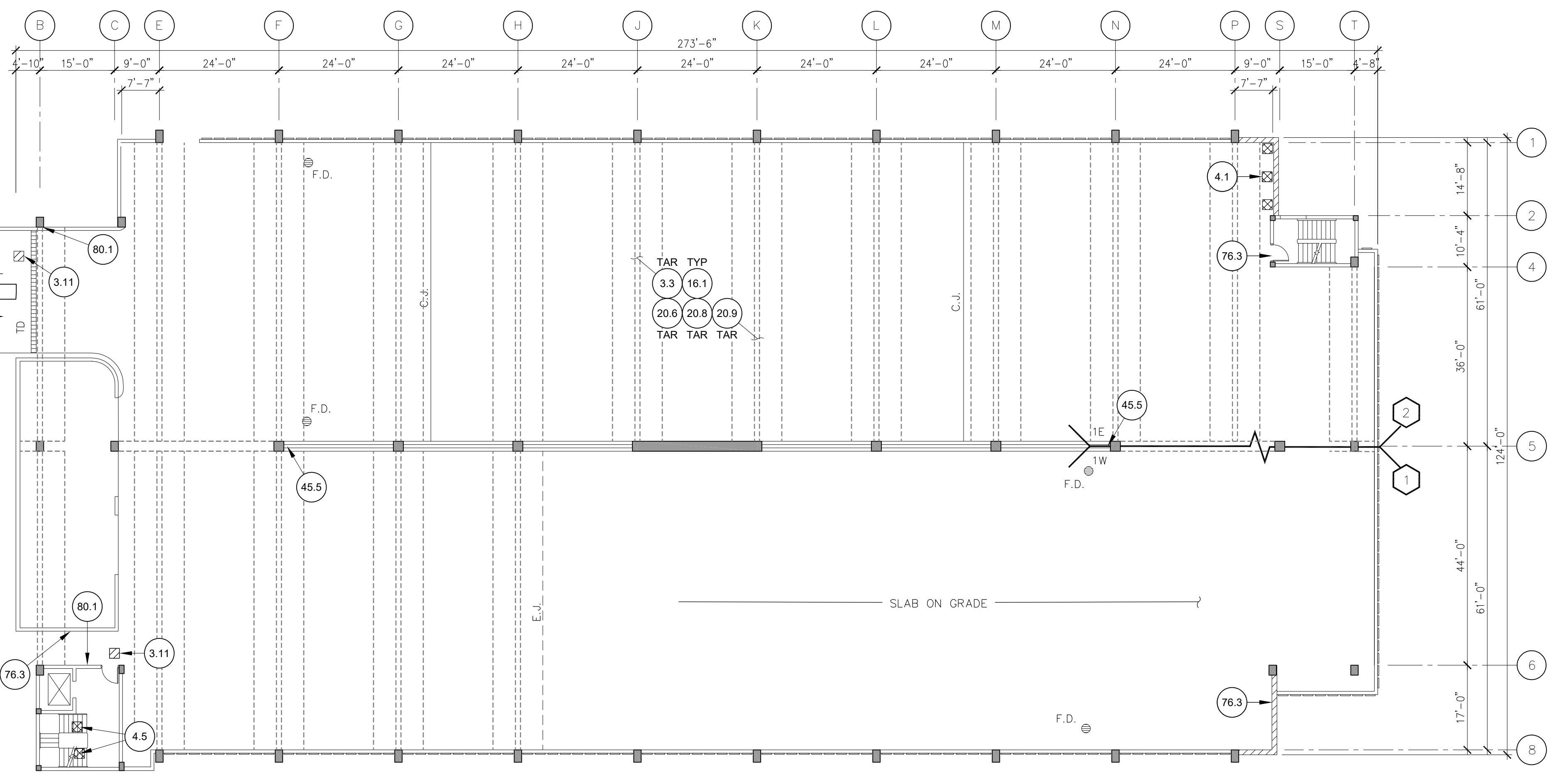
R-121



- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
- COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
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- WORK ITEM 3.9:** CONTRACTOR SHALL IDENTIFY LOCATIONS FOR P/T TEST OPENINGS WITH ENGINEER IN THE FIELD.
- WORK ITEM 16.1:** AT ALL CONCRETE FLOOR SLAB REPAIRS (WORK ITEM SERIES 3.0 AND 4.0) CONTRACTOR SHALL INSTALL FULL SYSTEM TRAFFIC TOPPING, INCIDENTAL TO CONCRETE WORK. COATING SHALL NOT BE APPLIED UNTIL REPAIR LOCATIONS HAVE APPROPRIATELY CURED.
- WORK ITEM SERIES 20.0:** POST TENSIONING REPAIR LOCATIONS ARE NOT SPECIFICALLY IDENTIFIED IN THESE DOCUMENTS. CONTRACTOR SHALL USE CAUTION DURING ALL SLAB DEMOLITION WORK, AS TO NOT CAUSE DAMAGE TO THE EXISTING POST TENSIONING SYSTEM. ANY DAMAGE FOUND TO BE CAUSED BY DEMOLITION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL PERFORM DEMOLITION WORK AND REMOVE DEBRIS. CONTRACTOR SHALL REVIEW EACH REPAIR LOCATION WITH ENGINEER IN THE FIELD TO IDENTIFY POST TENSIONING SYSTEM DAMAGE AND REPAIR REQUIREMENTS.



1 BASEMENT LEVEL PLAN
 RAMP 2 (AUDITORIUM)
 SCALE: 1/16" = 1'-0"
 NORTH



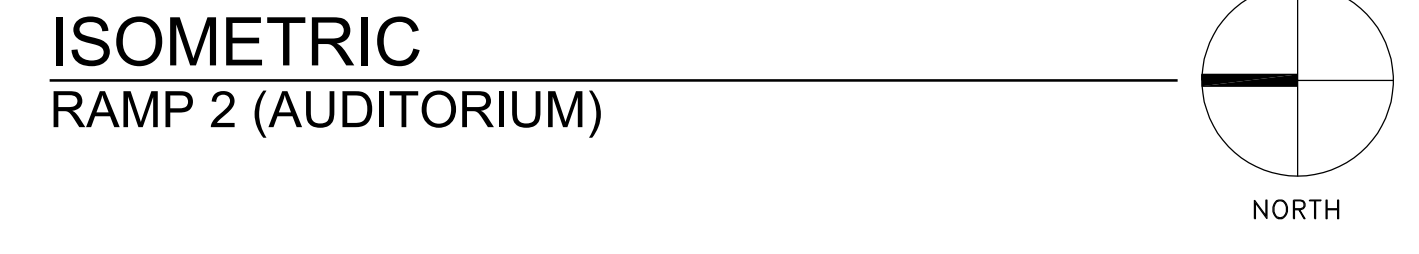
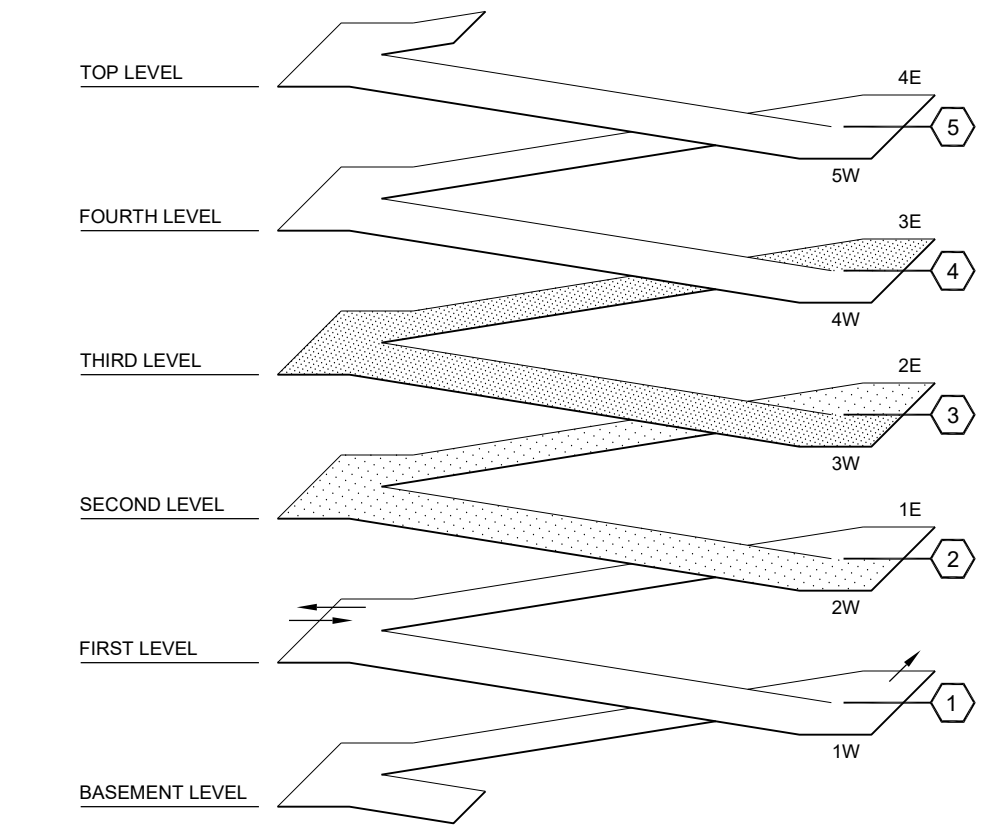
2 LEVEL 1 PLAN
 RAMP 2 (AUDITORIUM)
 SCALE: 1/16" = 1'-0"
 NORTH

RAMP #2 (AUDITORIUM) WORK ITEM TABLE

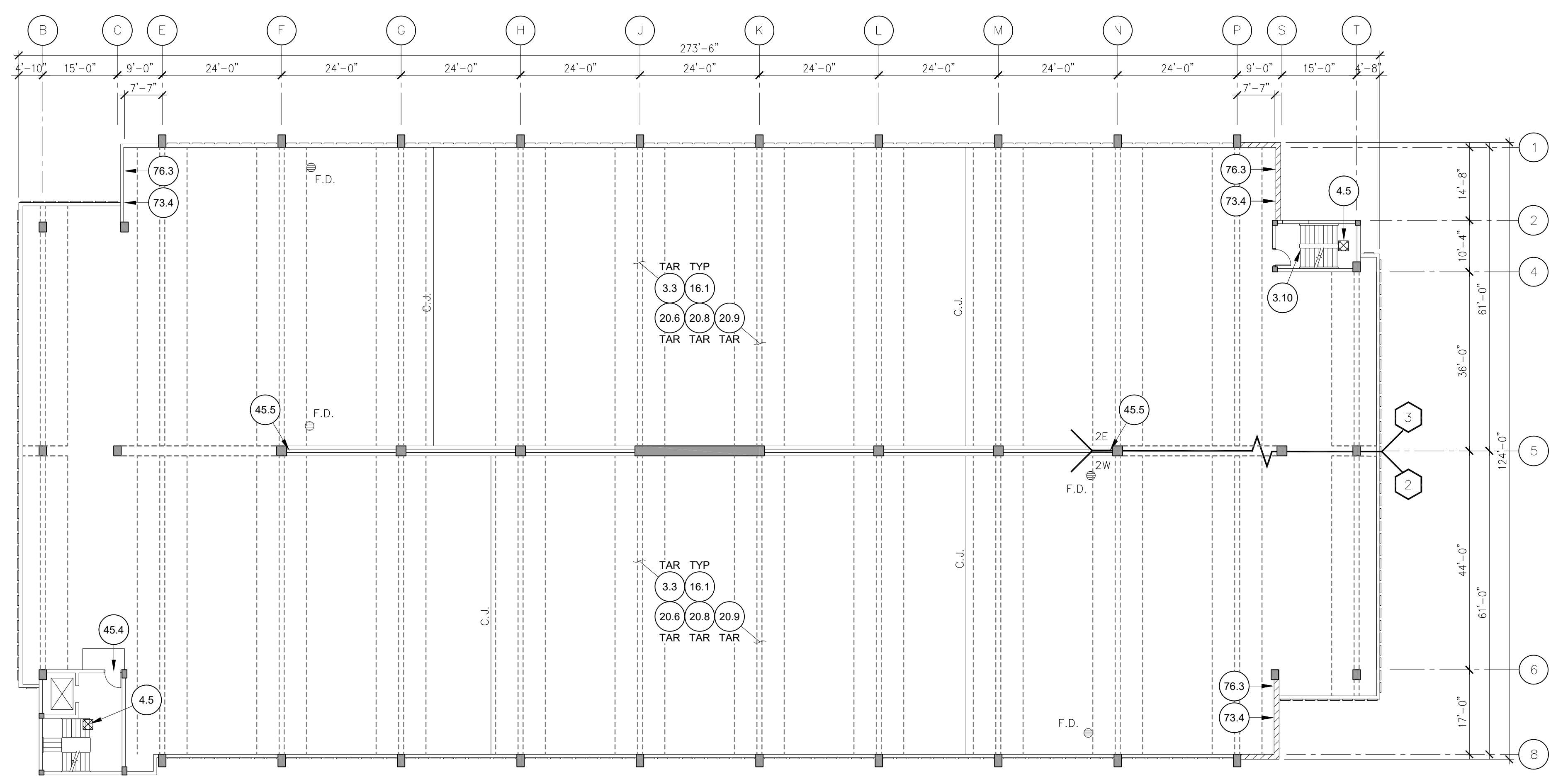
WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY			
1.1	PROJECT MOBILIZATION	LS	1	11.7B	RAIL PLATE SEALANT	LS 1
1.2	CONCRETE FORMWORK	INCIDENTAL	-	16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL -
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-	20.2	PROTECT EXPOSED PIT TENDONS	INCIDENTAL -
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-	20.6	TENDON SPICE COUPLING (CENTER PULL)	EA 6
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-	20.8	TENDON SPICE COUPLING (DOUBLE)	EA 6
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	10	20.9	PIT TENDON MATERIAL	LF 100
3.3	FLOOR REPAIR - FULL DEPTH	SF	500	25.9	MECHANICAL - INSTALL UTILITY COVER PLATES	EA 6
3.4	FLOOR REPAIR - CURBS / WALKS	SF	10	43.3	RAILING REPAIR	LS 1
3.9	FLOOR REPAIR - PARTIAL DEPTH TEST OPENING	LS	10	43.4	REPLACE RAILING ANCHORS	LS 20
3.10	FLOOR REPAIR - STAIR NOSING	SF	30	45.4	PAINT DOORS AND FRAMES	EA 2
3.11	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40	45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS 1
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	60	45.8	PAINT RAILING	LS 1
4.5	STAIR CEILING REPAIR - PARTIAL DEPTH	SF	180	73.4	INSTALL NEW WEEP HOLES	LS 1
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	30	76.3	TUCKPOINTING	LS 700
6.1	COLUMN REPAIR - PARTIAL DEPTH	SF	60	80.1	REMOVE AND REPLACE BRICK	EA 30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	50	80.3	REMOVE AND REPLACE CMU	LF 20
11.2	JOINT SEALANTS	LF	240			

CAUTION NOTE:
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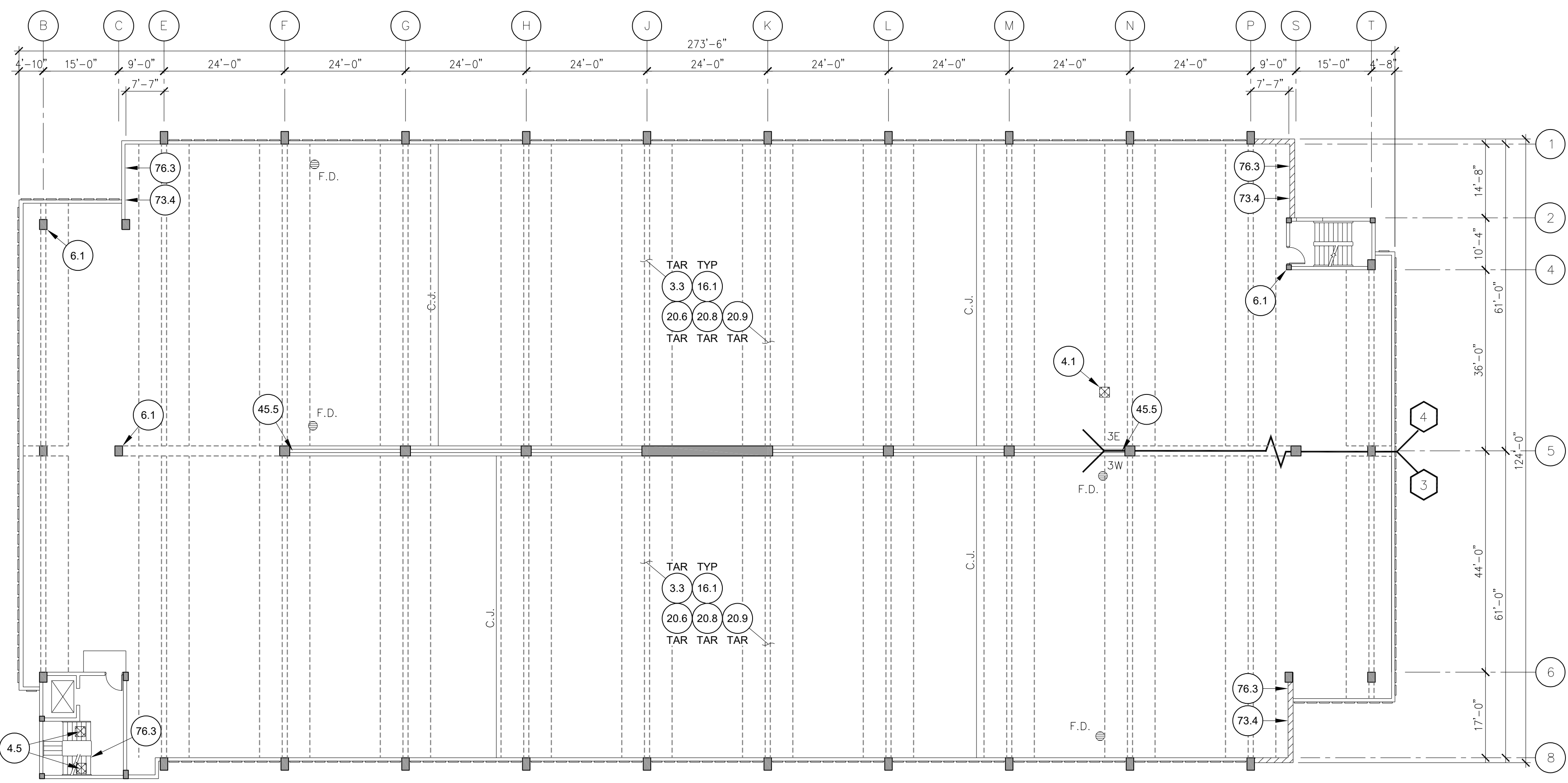
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- ISOMETRIC RAMP 2 (AUDITORIUM)**
- REFER TO DRAWING R-001 FOR GENERAL NOTES.
 - REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
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1 LEVEL 2 PLAN
RAMP 2 (AUDITORIUM)
 SCALE: 1/16" = 1'-0"
 NORTH



2 LEVEL 3 PLAN
RAMP 2 (AUDITORIUM)
 SCALE: 1/16" = 1'-0"
 NORTH

RAMP #2 (AUDITORIUM) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY				
1.1	PROJECT MOBILIZATION	LS	1	11.7B	RAIL PLATE SEALANT	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-	16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-	20.2	PROTECT EXPOSED PIT TENDONS	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-	20.6	TENDON SPICE COUPLING (CENTER PULL)	EA	6
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-	20.8	TENDON SPICE COUPLING (DOUBLE)	EA	6
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	10	20.9	PIT TENDON MATERIAL	LF	100
3.3	FLOOR REPAIR - FULL DEPTH	SF	500	25.9	MECHANICAL - INSTALL UTILITY COVER PLATES	EA	6
3.4	FLOOR REPAIR - CURBS / WALKS	SF	10	43.3	RAILING REPAIR	LS	1
3.9	FLOOR REPAIR - PARTIAL DEPTH TEST OPENING	LS	10	43.4	REPLACE RAILING ANCHORS	LS	20
3.10	FLOOR REPAIR - STAIR NOSING	SF	30	45.4	PAINT DOORS AND FRAMES	EA	2
3.11	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40	45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	60	45.8	PAINT RAILING	LS	1
4.5	STAIR CEILING REPAIR - PARTIAL DEPTH	SF	180	73.4	INSTALL NEW WEEP HOLES	LS	1
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	30	76.3	TUCKPOINTING	LS	700
6.1	COLUMN REPAIR - PARTIAL DEPTH	SF	60	80.1	REMOVE AND REPLACE BRICK	EA	30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	50	80.3	REMOVE AND REPLACE CMU	LF	20
11.2	JOINT SEALANTS	LF	240				

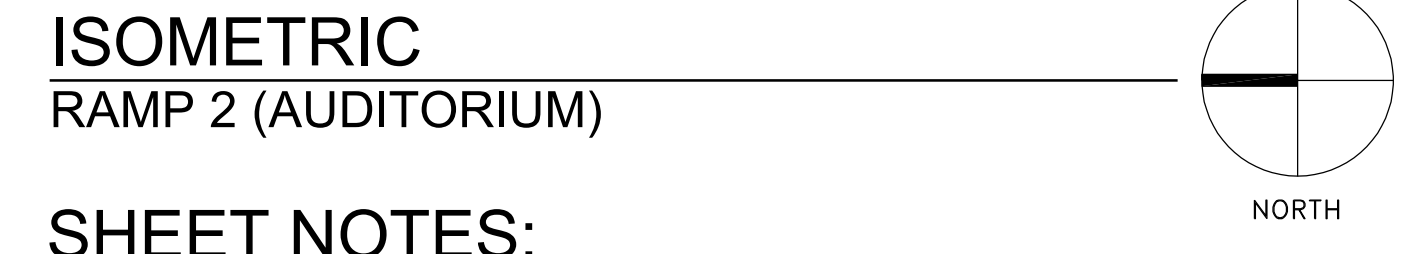
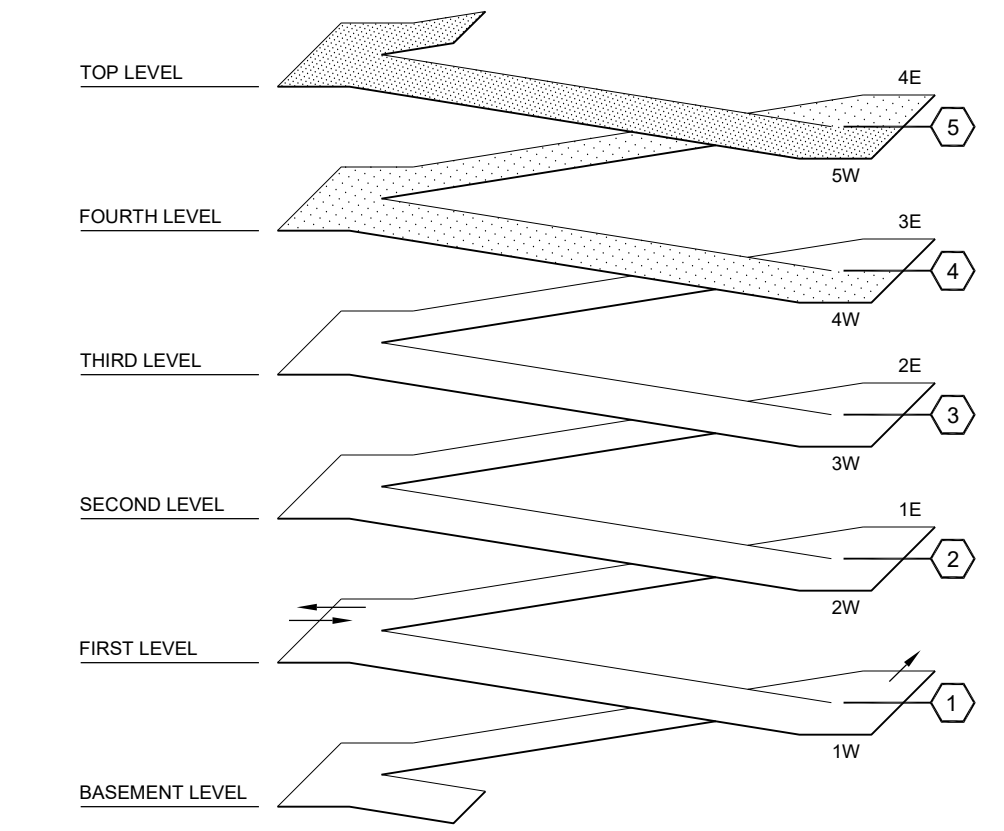
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CAPITAL PROJ. NO.
CP23098

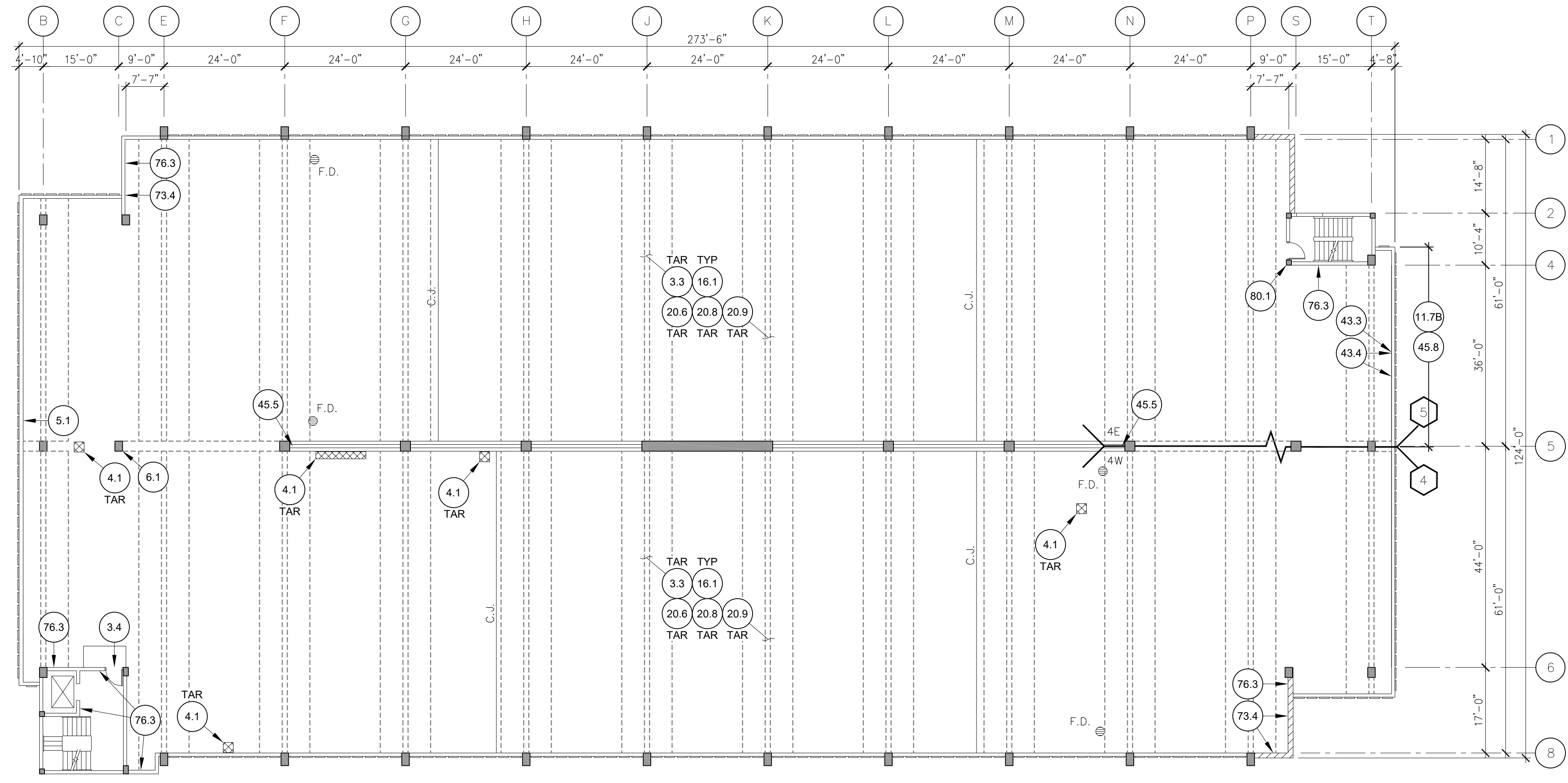
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ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	AL
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 2
LEVEL 4 & 5 PLANS

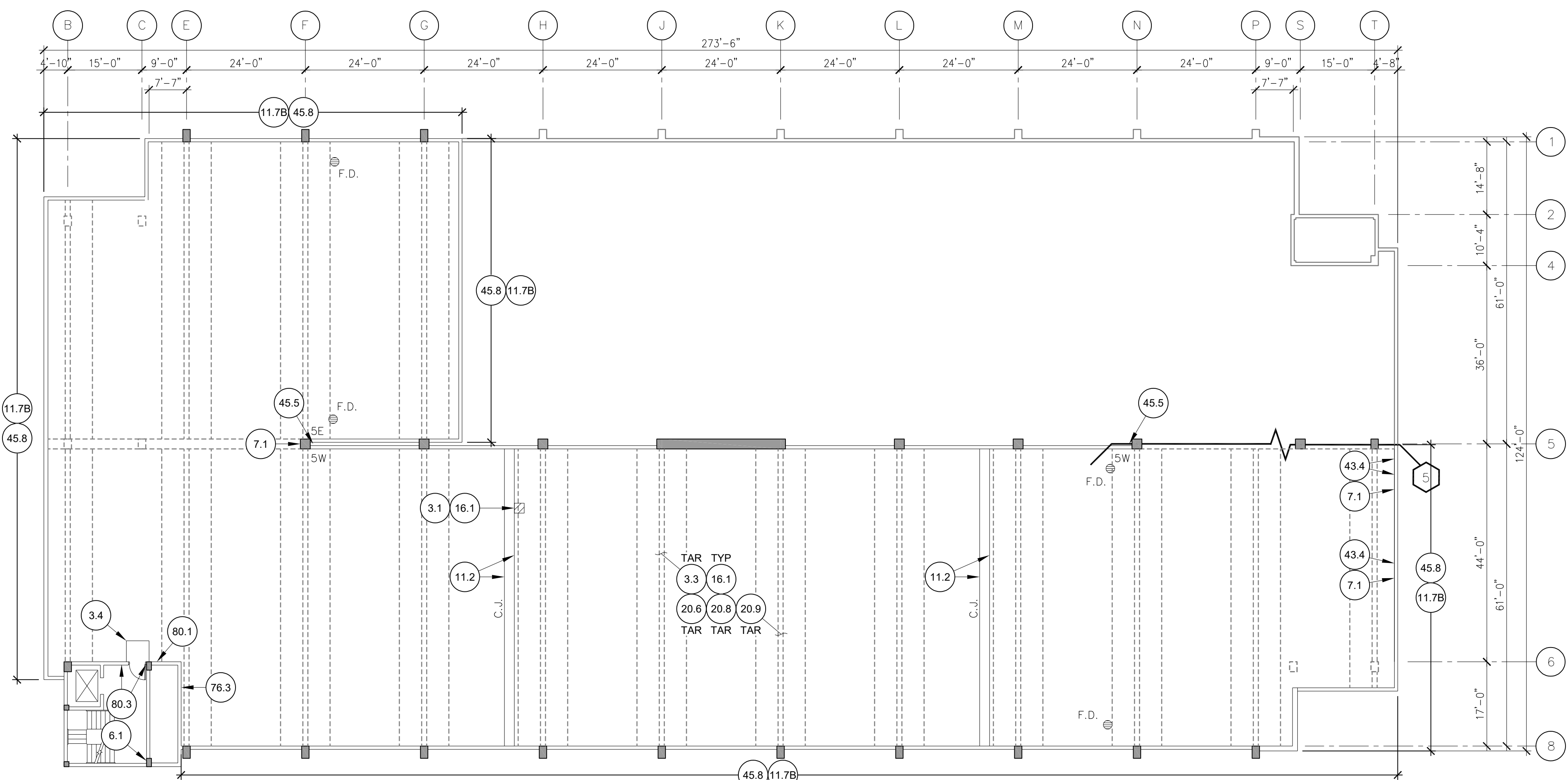
R-123



- SHEET NOTES:**
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 - WORK ITEM 16.1: AT ALL CONCRETE FLOOR SLAB REPAIRS (WORK ITEM SERIES 3.0 AND 4.0) CONTRACTOR SHALL INSTALL FULL SYSTEM TRAFFIC TOPPING, INCIDENTAL TO CONCRETE WORK. COATING SHALL NOT BE APPLIED UNTIL REPAIR LOCATIONS HAVE APPROPRIATELY CURED.
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1 LEVEL 4 PLAN
RAMP 2 (AUDITORIUM)
SCALE: 1/16" = 1'-0"
NORTH



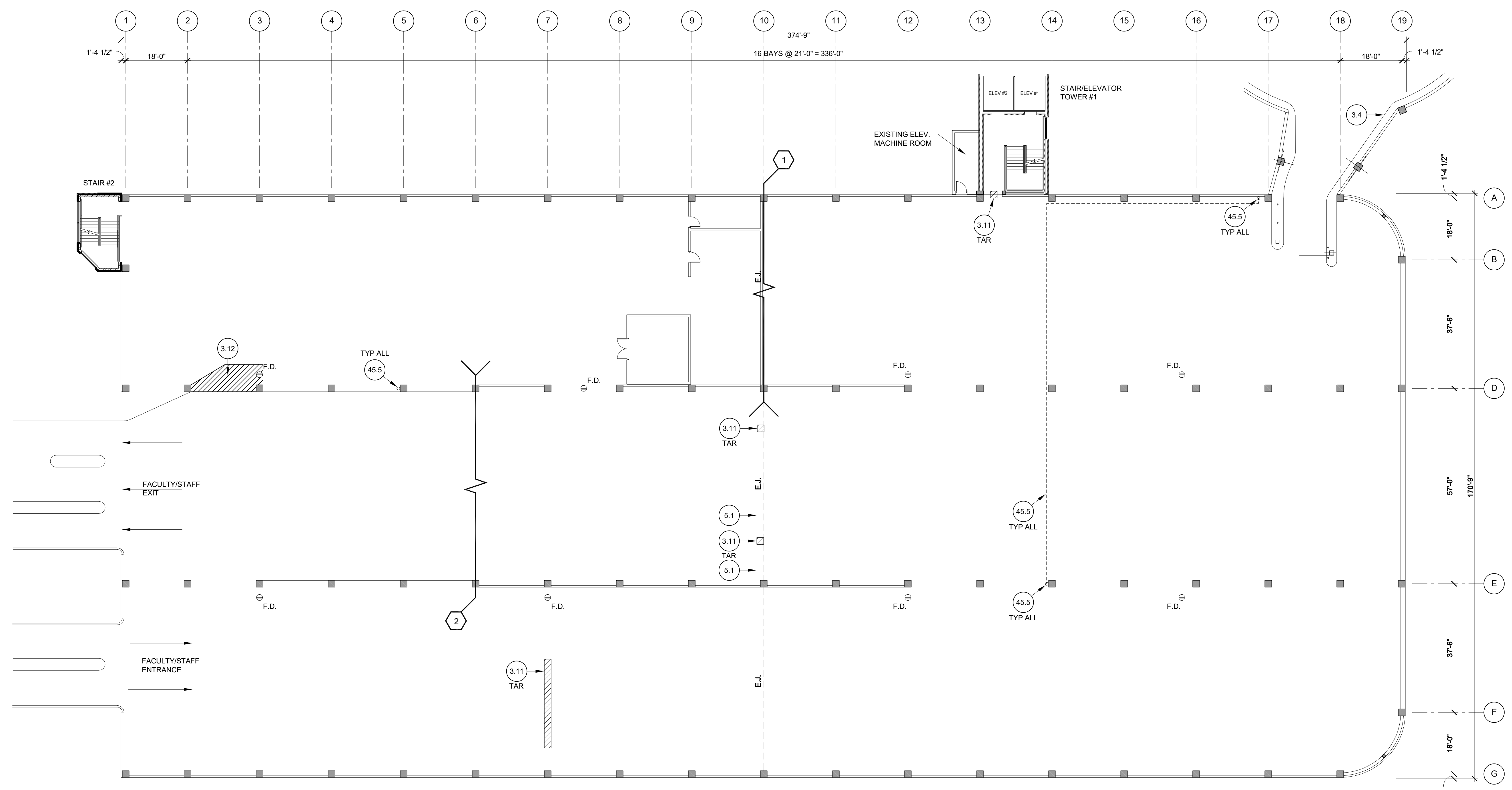
2 LEVEL 5 PLAN
RAMP 2 (AUDITORIUM)
SCALE: 1/16" = 1'-0"
NORTH

RAMP #2 (AUDITORIUM) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY				
1.1	PROJECT MOBILIZATION	LS	1	11.7B	RAIL PLATE SEALANT	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-	16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-	20.2	PROTECT EXPOSED PIT TENDONS	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-	20.6	TENDON SPICE COUPLING (CENTER PULL)	EA	6
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-	20.8	TENDON SPICE COUPLING (DOUBLE)	EA	6
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	10	20.9	PIT TENDON MATERIAL	LF	100
3.3	FLOOR REPAIR - FULL DEPTH	SF	500	25.9	MECHANICAL - INSTALL UTILITY COVER PLATES	EA	6
3.4	FLOOR REPAIR - CURBS / WALKS	SF	10	43.3	RAILING REPAIR	LS	1
3.9	FLOOR REPAIR - PARTIAL DEPTH TEST OPENING	LS	10	43.4	REPLACE RAILING ANCHORS	LS	20
3.10	FLOOR REPAIR - STAIR NOSING	SF	30	45.4	PAINT DOORS AND FRAMES	EA	2
3.11	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40	45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	60	45.8	PAINT RAILING	LS	1
4.5	STAIR CEILING REPAIR - PARTIAL DEPTH	SF	180	73.4	INSTALL NEW WEEP HOLES	LS	1
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	30	76.3	TUCKPOINTING	LS	700
6.1	COLUMN REPAIR - PARTIAL DEPTH	SF	60	80.1	REMOVE AND REPLACE BRICK	EA	30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	50	80.3	REMOVE AND REPLACE CMU	LF	20
11.2	JOINT SEALANTS	LF	240				

CAUTION NOTE:
THE FLOOR SLAB HAS POST-TENSIONING TENDONS. THESE TENDONS ARE NEAR THE FLOOR SURFACE AT SPALLS AND DELAMINATIONS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN SAW-CUTTING SO AS NOT TO DAMAGE EXISTING TENDONS OR TENDON SHEATHS. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. CHIPPING WITH 15 LB HAMMERS SHALL BE USED IN LIEU OF SAW-CUTTING NEAR SHALLOW TENDONS.

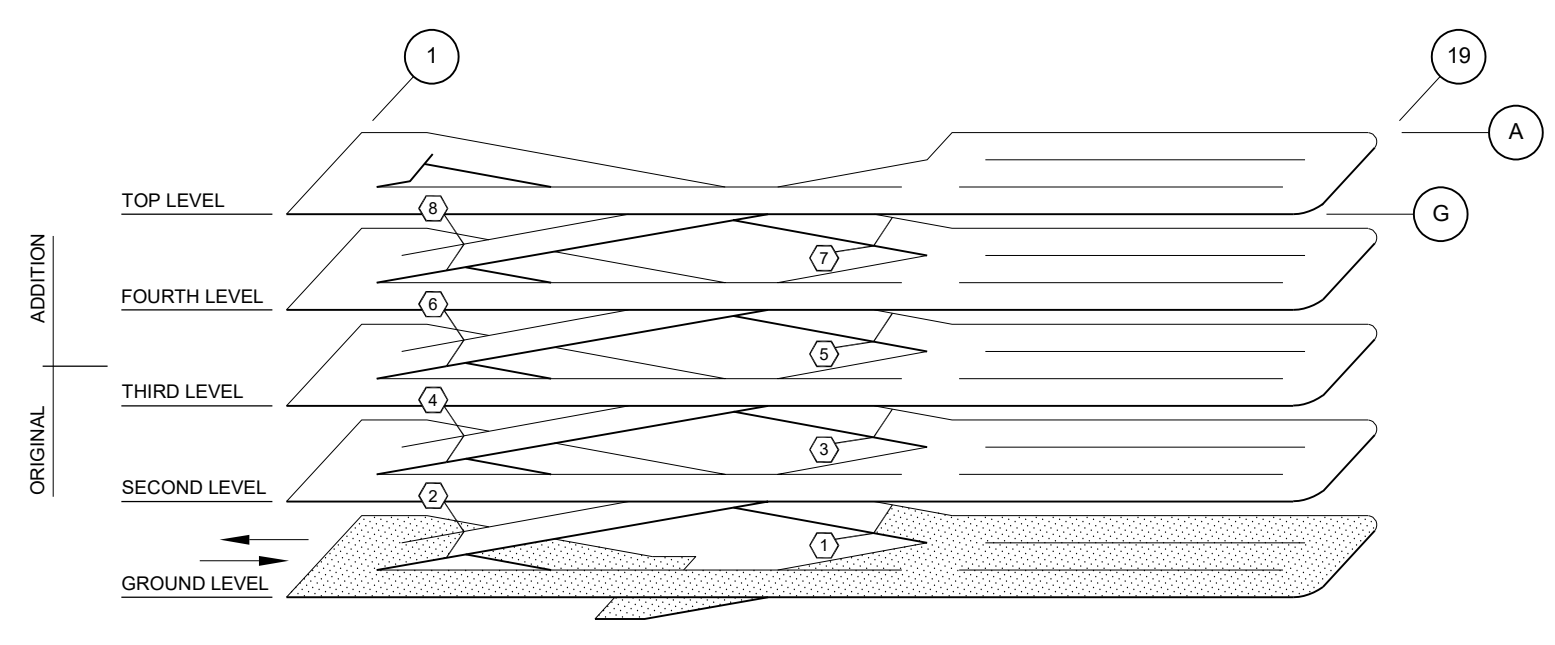
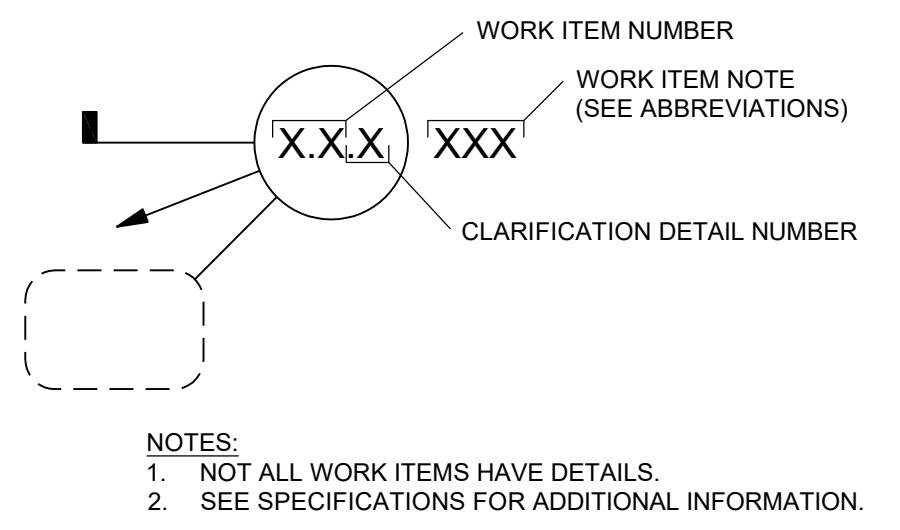
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1 LEVEL 1 PLAN RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH

LEGEND:

- [Hatched Box] = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- [Cross-hatched Box] = WI 4.1, 4.5 - CEILING REPAIR
- [White Box] = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



ISOMETRIC RAMP 3 (WHARTON)
 NORTH

RAMP #3 (WHARTON CENTER) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	REQ QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
31	FLOOR REPAIR - PARTIAL DEPTH	SF	38
34	FLOOR REPAIR - CURBS / WALKS	SF	60
310	FLOOR REPAIR - STAR NOSING	SF	10
311	FLOOR REPAIR - SLAB ON-GRADE - PARTIAL DEPTH	SF	40
312	FLOOR REPAIR - SLAB ON-GRADE RE-SLOPE SLAB	LS	1
41	CEILING REPAIR - PARTIAL DEPTH	SF	70
51	BEAM REPAIR - PARTIAL DEPTH	SF	60
61	COLUMN REPAIR - PARTIAL DEPTH	SF	10
71	WALL REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	80
11.1	ROUT AND SEAL CRACKS	LF	600
11.3B	COLUMN TO WALL JOINT SEALANT	LF	360
11.7	COVE SEALANTS	LF	20
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
73.1	METAL FLASHING REPAIR	LS	1
76.3	TUCKPOINTING	LS	980
80.1	REMOVE AND REPLACE BRICK	EA	10
80.3	REMOVE AND REPLACE CMU	LF	20

- SHEET NOTES:**
- REFER TO DRAWING R-001 FOR GENERAL NOTES.
 - REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
 - COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
 - CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.
 - CONTRACTOR SHALL FURNISH AND APPLY PAINT / CONCRETE STAIN, APPROVED BY ENGINEER, TO ALL VERTICAL AND OVERHEAD CONCRETE REPAIRS, INCIDENTAL. COATINGS SHALL NOT BE APPLIED UNTIL REPAIR LOCATIONS HAVE APPROPRIATELY CURED.
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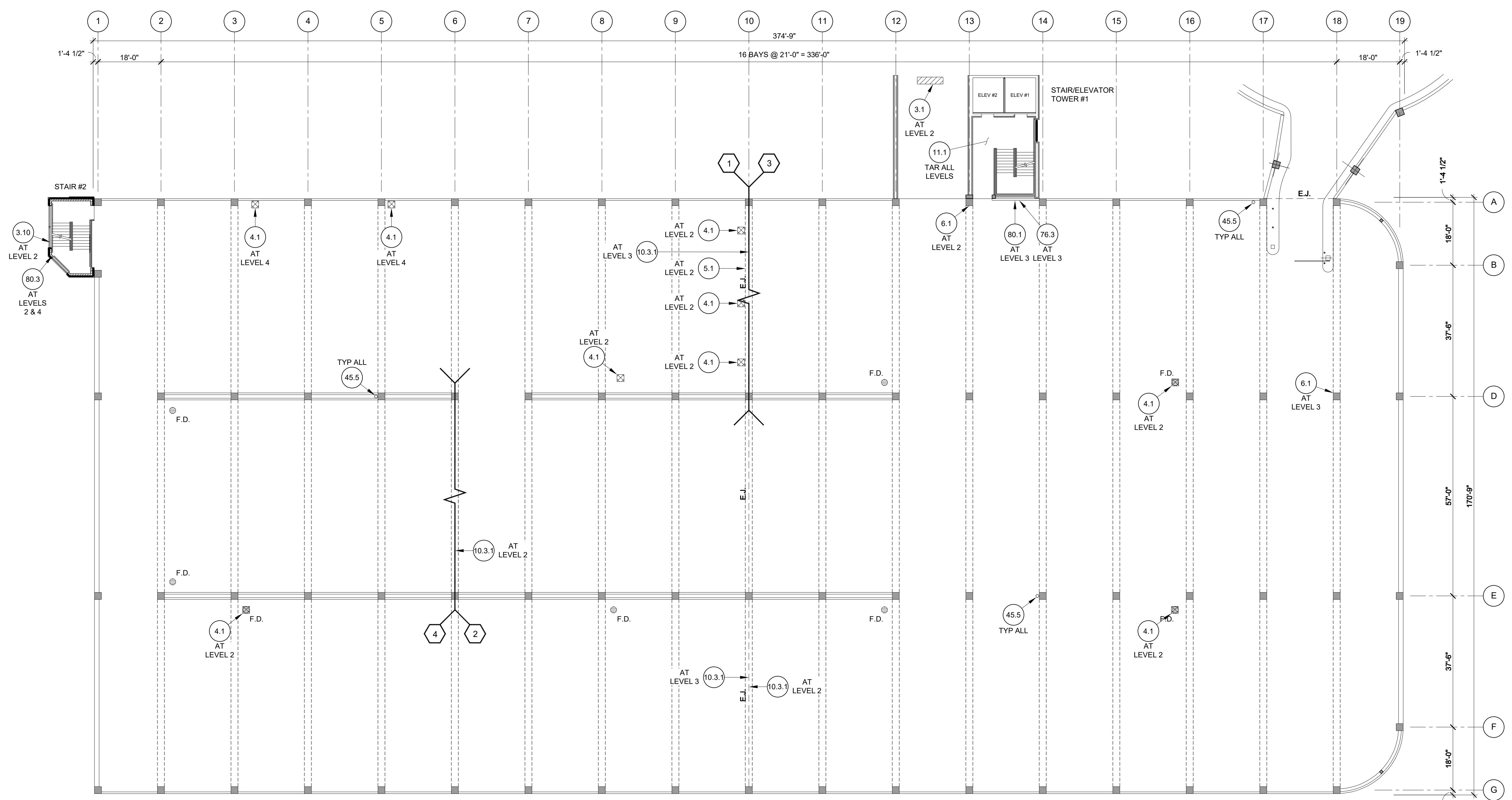
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CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 3
 LEVEL 1 PLAN

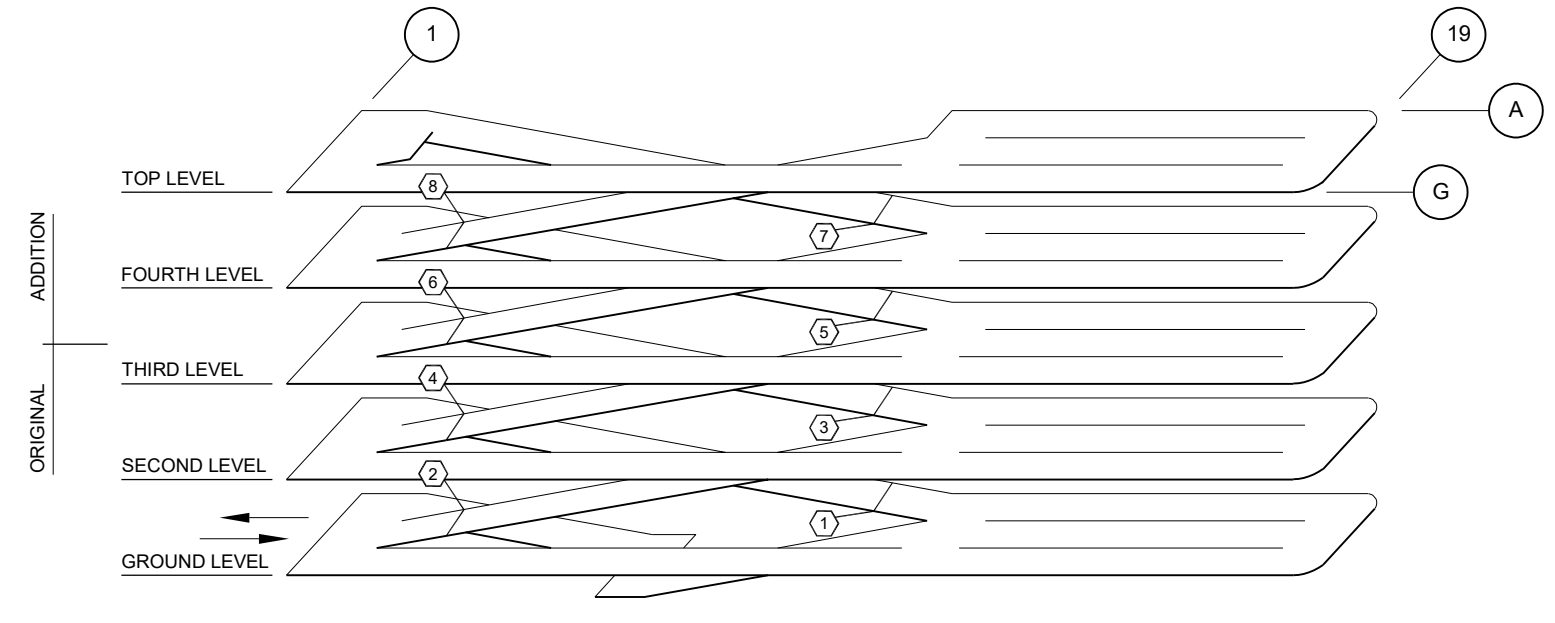
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1 TYPICAL LEVEL PLAN RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



ISOMETRIC RAMP 3 (WHARTON)
 NORTH

WORK ITEM NUMBER
WORK ITEM NOTE (SEE ABBREVIATIONS)
CLARIFICATION DETAIL NUMBER

NOTES:
 1. NOT ALL WORK ITEMS HAVE DETAILS.
 2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RAMP #3 (WHARTON CENTER) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	REQ QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
31	FLOOR REPAIR - PARTIAL DEPTH	SF	38
34	FLOOR REPAIR - CURBS / WALKS	SF	60
310	FLOOR REPAIR - STAIR NOSING	SF	10
311	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40
312	FLOOR REPAIR - SLAB-ON-GRADE RE-SLOPE SLAB	LS	1
41	CEILING REPAIR - PARTIAL DEPTH	SF	70
51	BEAM REPAIR - PARTIAL DEPTH	SF	60
61	COLUMN REPAIR - PARTIAL DEPTH	SF	10
71	WALL REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	80
11.1	ROUT AND SEAL CRACKS	LF	600
11.3B	COLUMN TO WALL JOINT SEALANT	LF	360
11.7	COVE SEALANTS	LF	20
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
73.1	METAL FLASHING REPAIR	LS	1
76.3	TUCKPOINTING	LS	980
80.1	REMOVE AND REPLACE BRICK	EA	10
80.3	REMOVE AND REPLACE CMU	LF	20

SHEET NOTES:

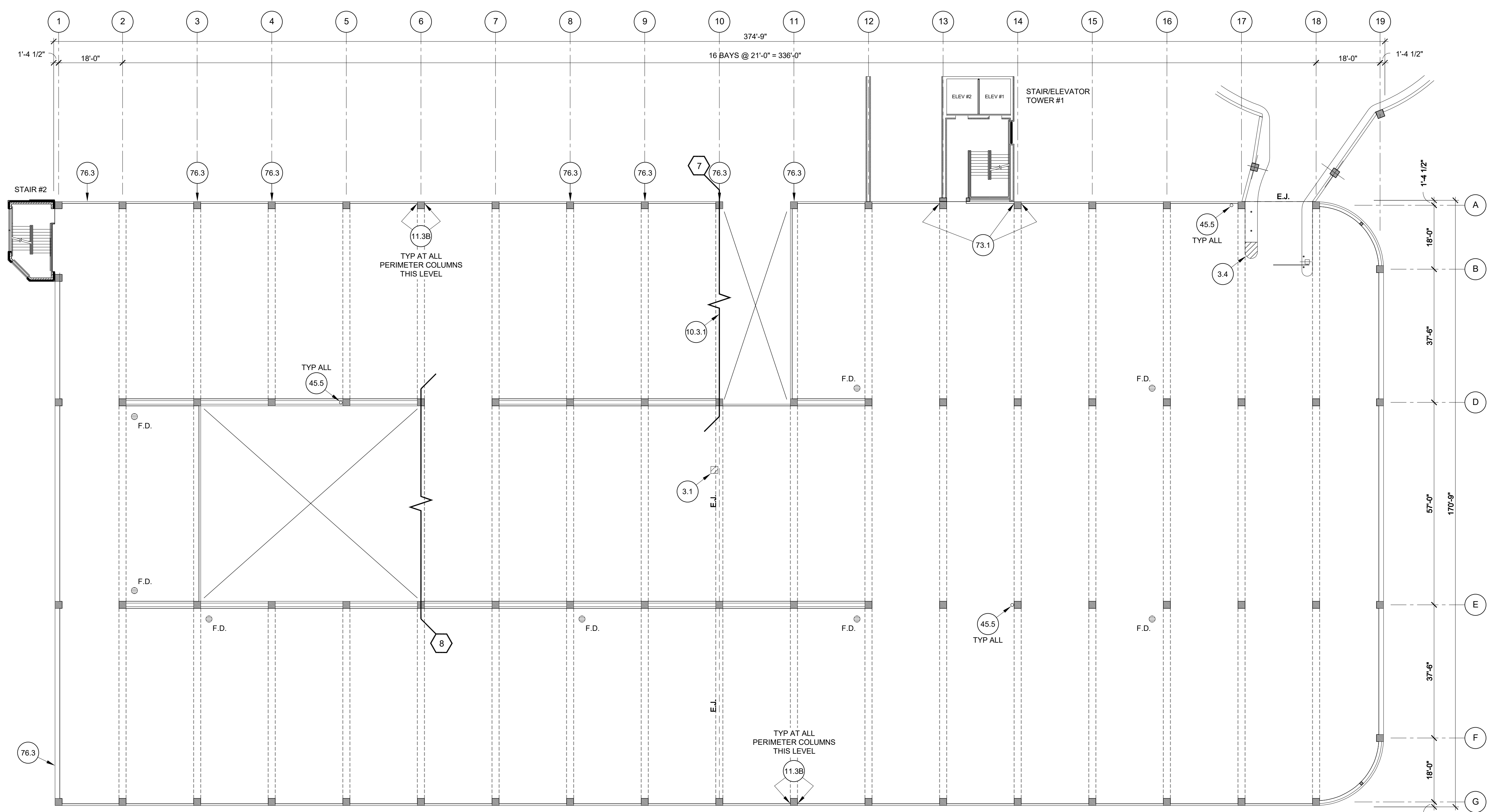
- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
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CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

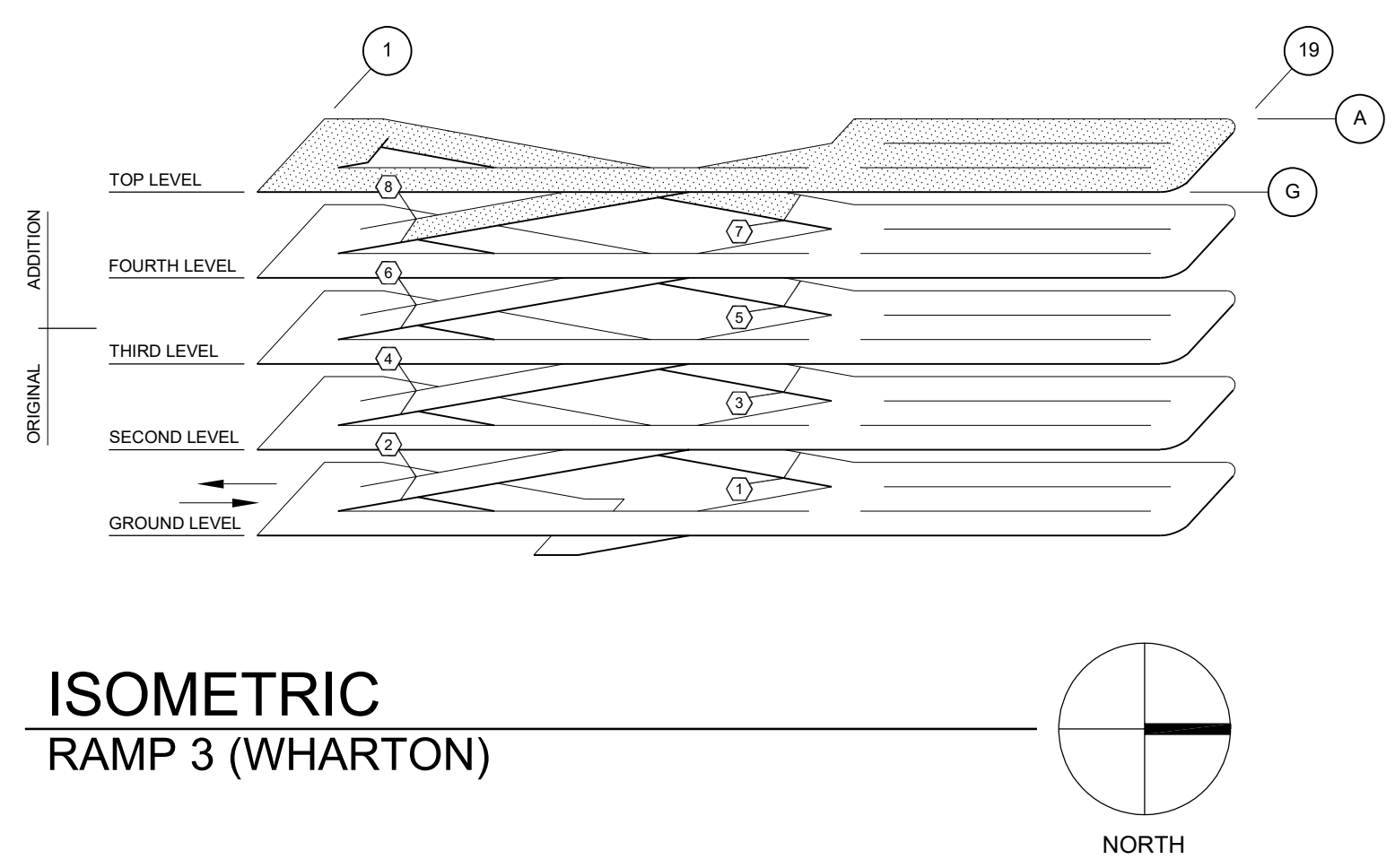
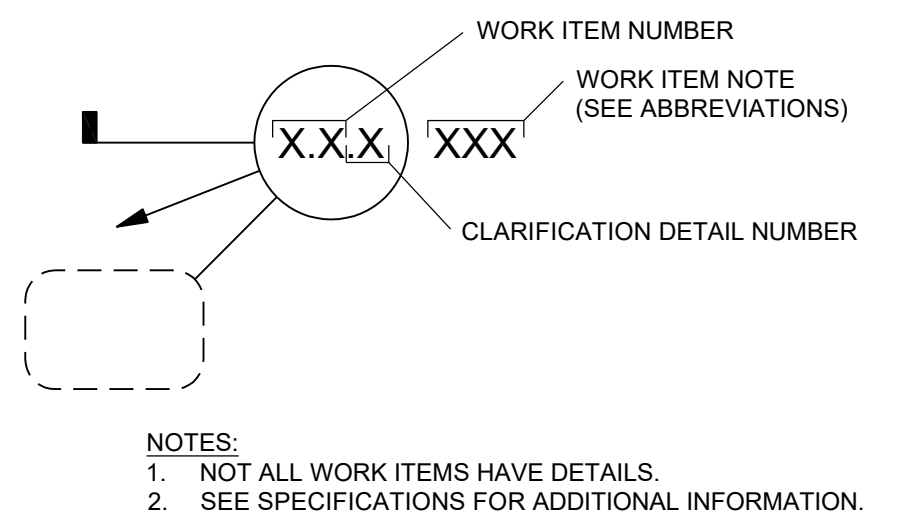
RAMP NO. 3
 TYPICAL LEVEL PLAN



1 LEVEL 5 PLAN RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



RAMP #3 (WHARTON CENTER) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	REQ QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
31	FLOOR REPAIR - PARTIAL DEPTH	SF	38
34	FLOOR REPAIR - CURBS / WALKS	SF	60
310	FLOOR REPAIR - STAIR NOSING	SF	10
311	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40
312	FLOOR REPAIR - SLAB-ON-GRADE RE-SLOPE SLAB	LS	1
41	CEILING REPAIR - PARTIAL DEPTH	SF	70
51	BEAM REPAIR - PARTIAL DEPTH	SF	60
61	COLUMN REPAIR - PARTIAL DEPTH	SF	10
71	WALL REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	80
11.1	ROUT AND SEAL CRACKS	LF	600
11.3B	COLUMN TO WALL JOINT SEALANT	LF	360
11.7	COVE SEALANTS	LF	20
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
45.5	PAINT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
73.1	METAL FLASHING REPAIR	LS	1
76.3	TUCKPOINTING	LS	980
80.1	REMOVE AND REPLACE BRICK	EA	10
80.3	REMOVE AND REPLACE CMU	LF	20

SHEET NOTES:

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CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 3
 LEVEL 5 PLAN

R-133

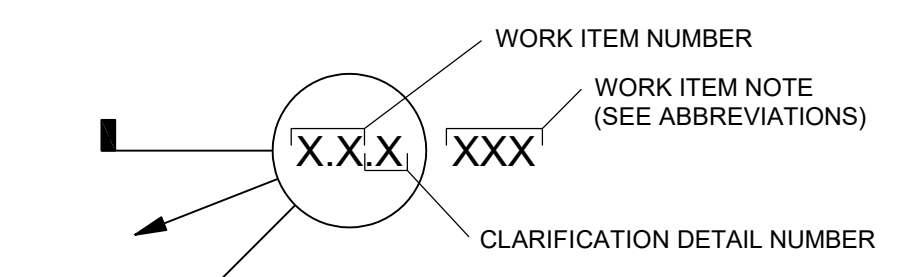
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ELEC.	N/A
CIVIL	SML
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REP.	AL
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DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

SHEET NOTES:

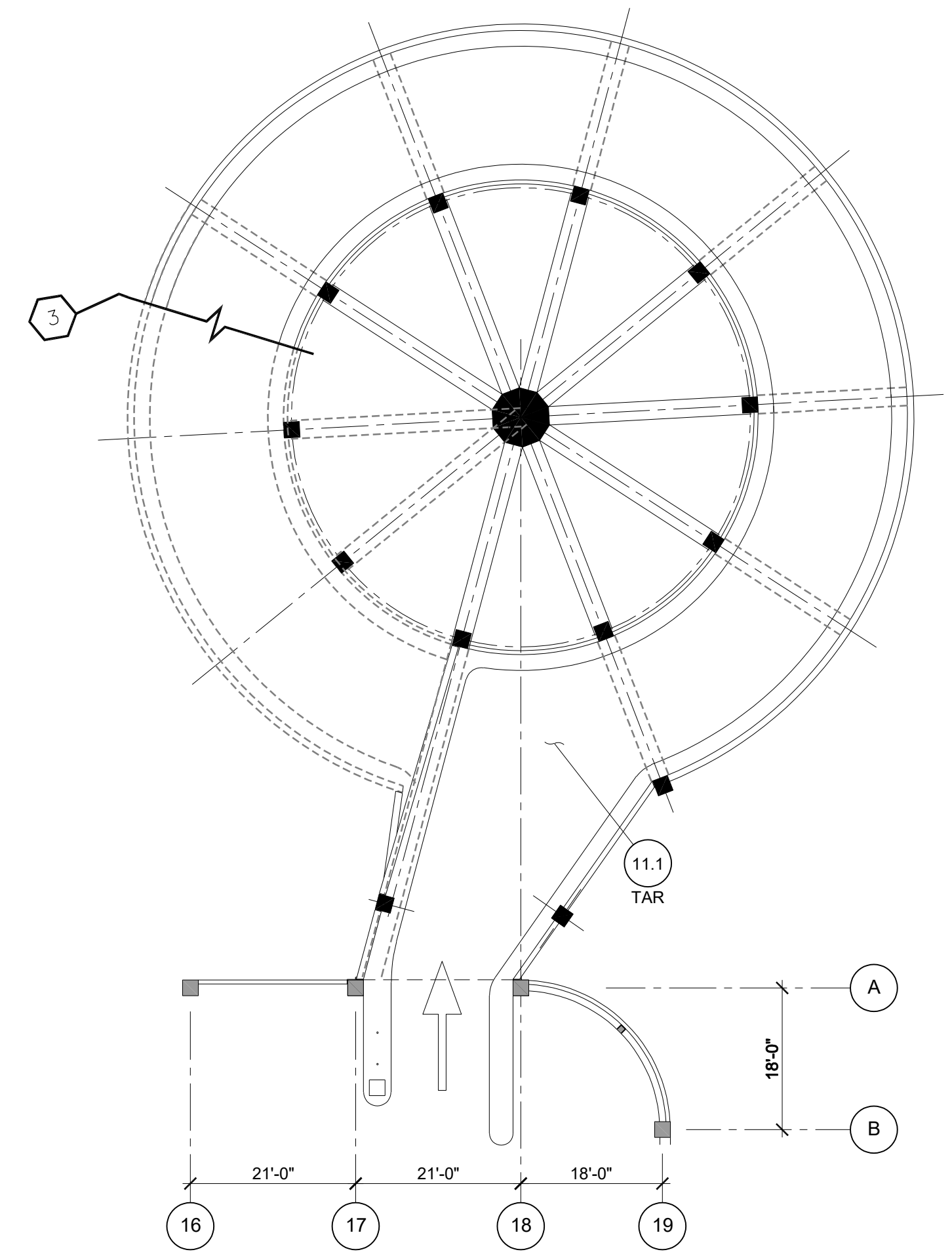
- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '02010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
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LEGEND:

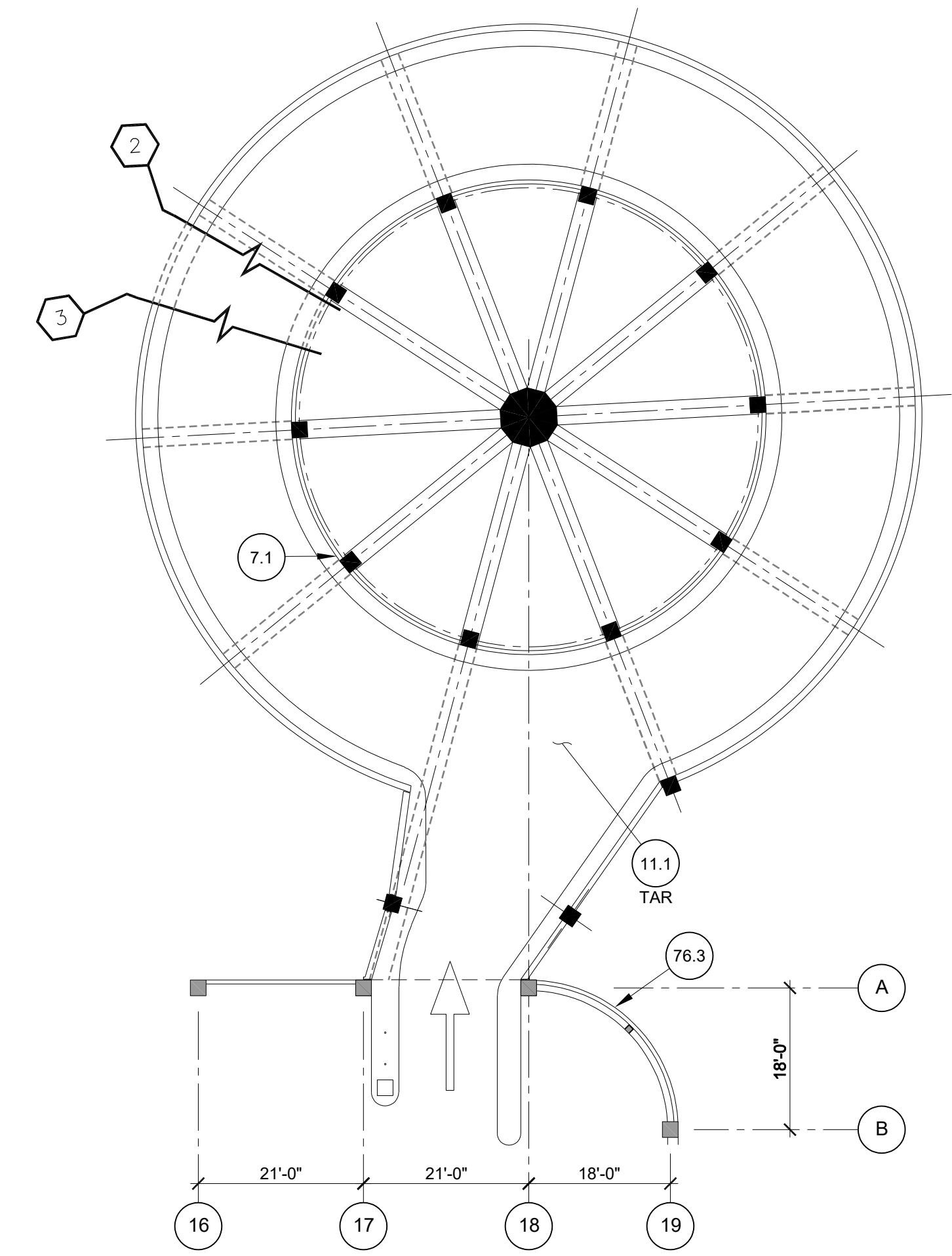
- [Hatched Pattern] = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- [Cross-hatched Pattern] = WI 4.1, 4.5 - CEILING REPAIR
- [White Box] = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



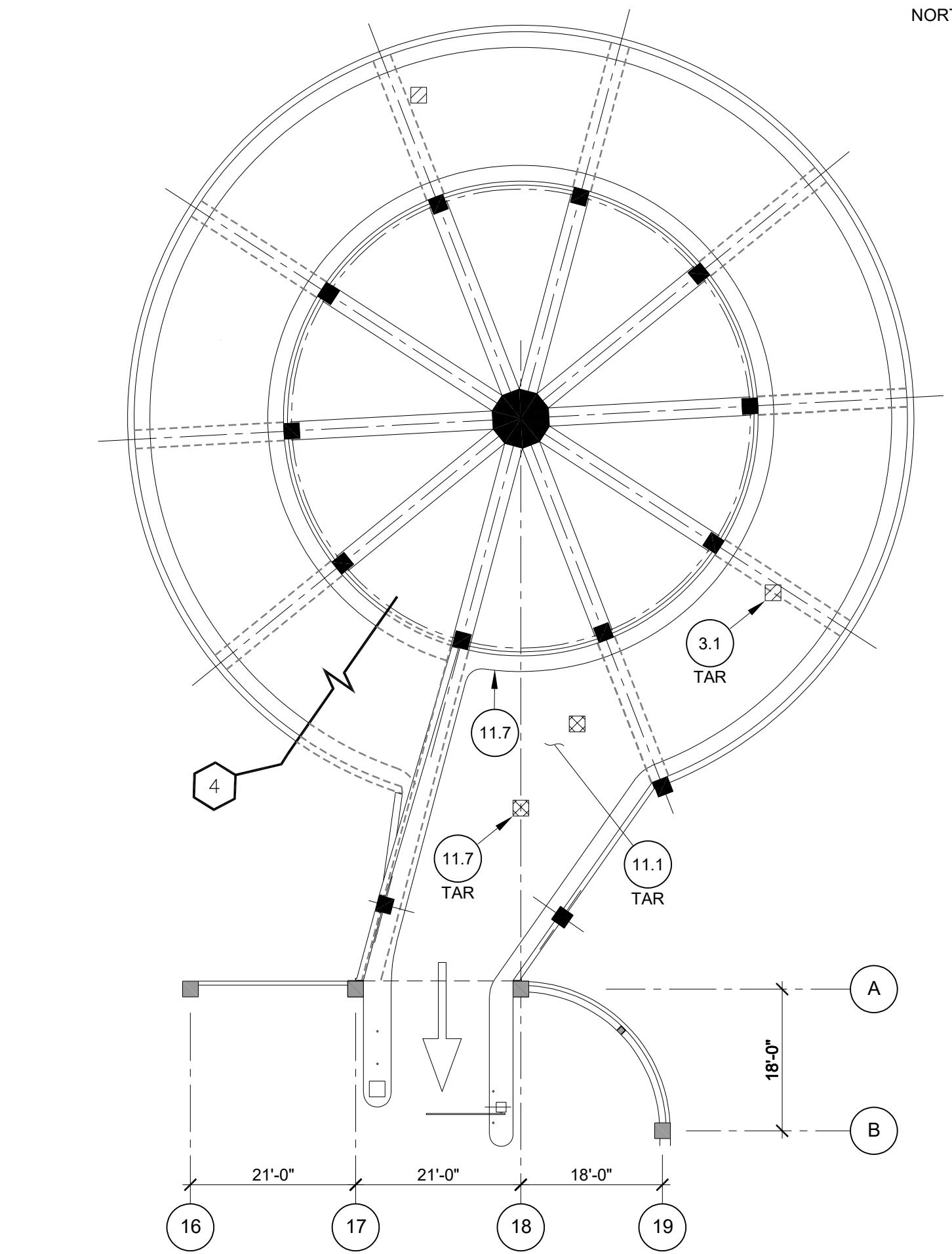
- NOTES:**
- NOT ALL WORK ITEMS HAVE DETAILS.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



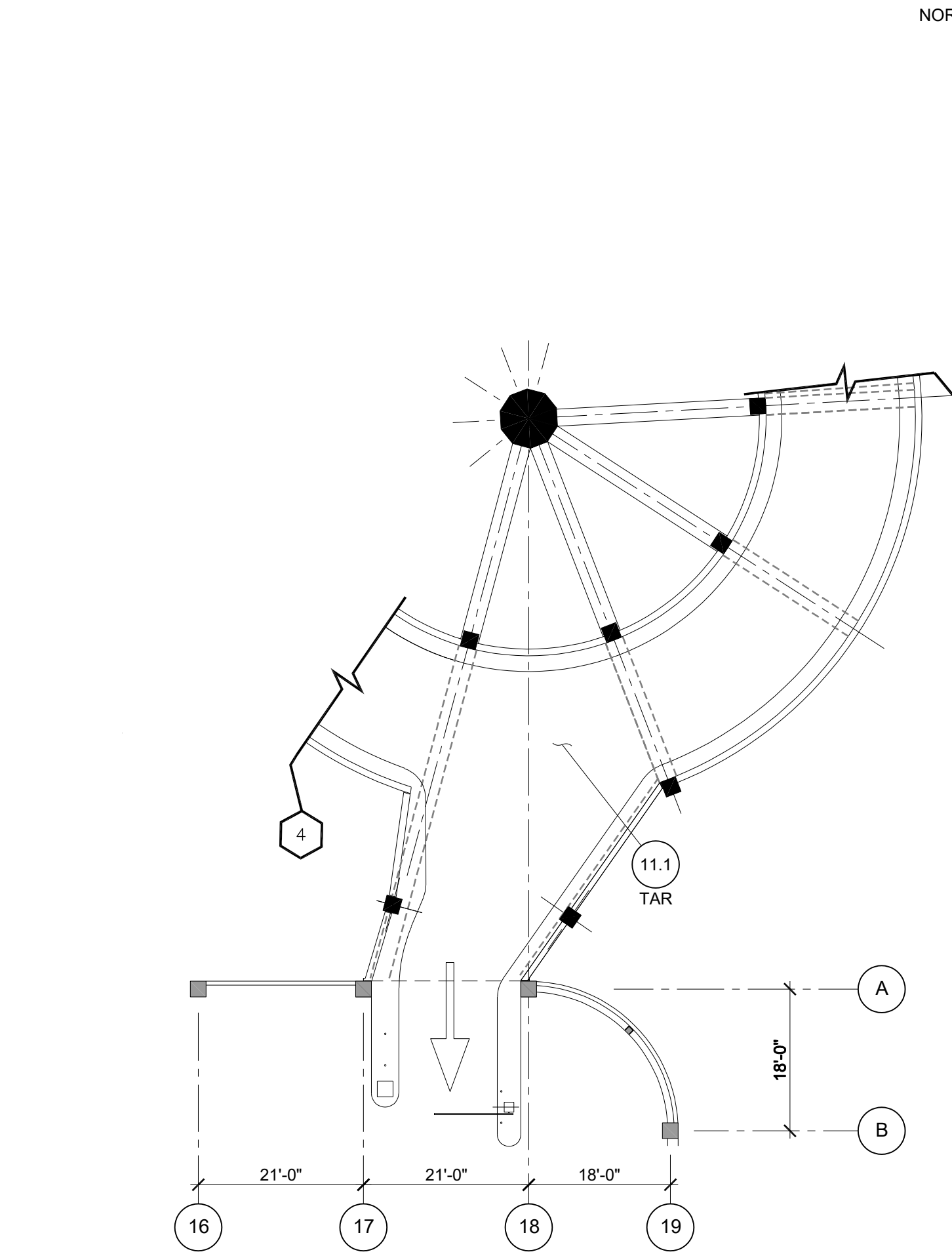
5 LEVEL 5 PLAN (OUTBOUND)
 RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH



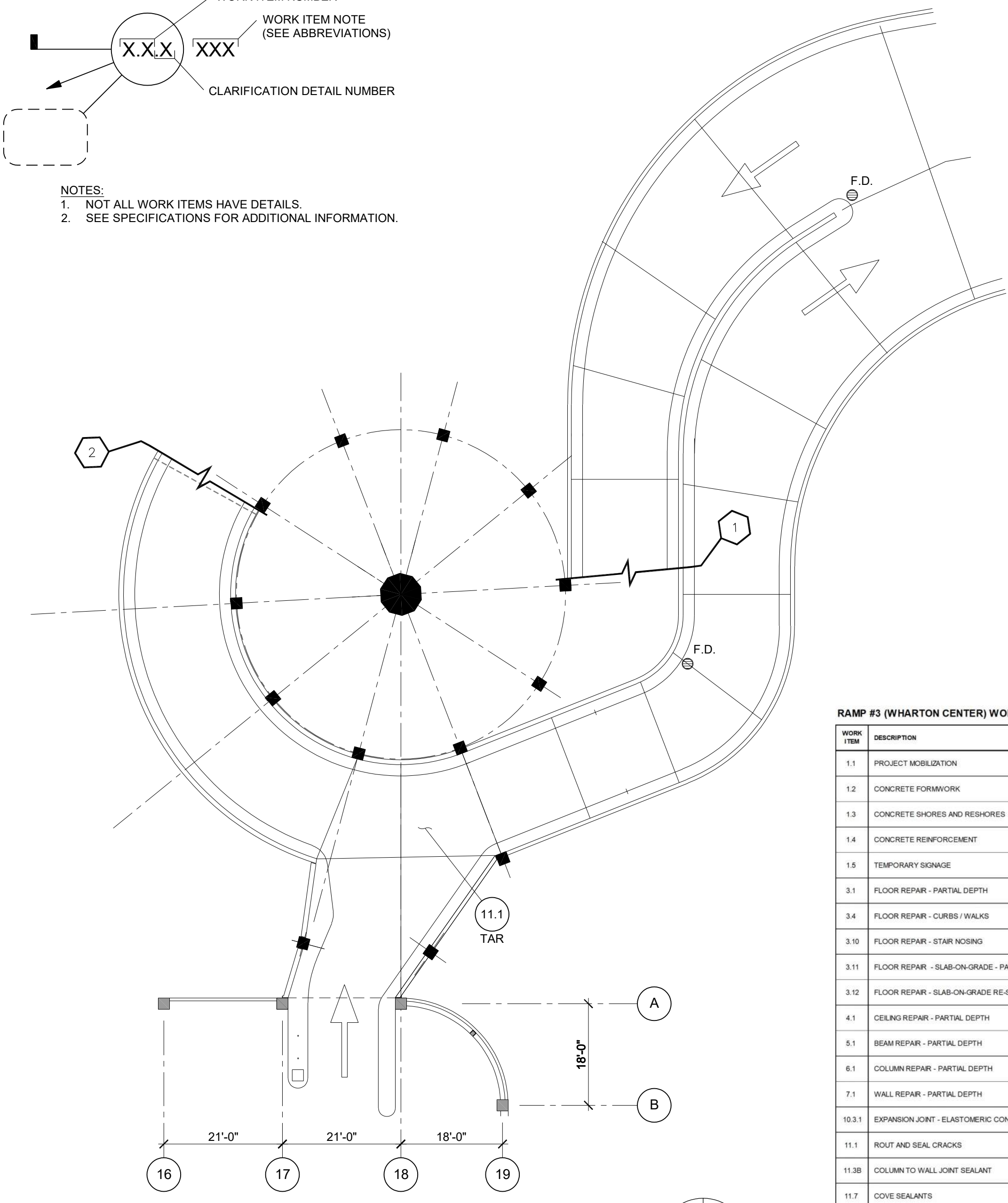
3 LEVEL 3 PLAN (OUTBOUND)
 RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH



4 LEVEL 4 PLAN (INBOUND)
 RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH



2 LEVEL 2 PLAN (INBOUND)
 RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH

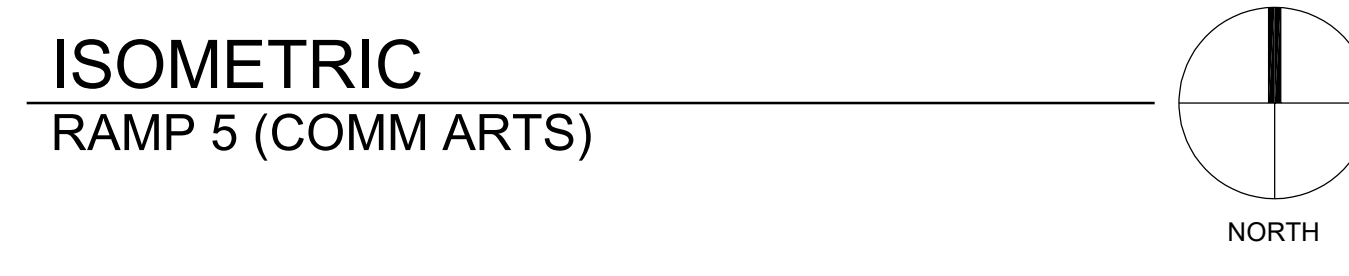
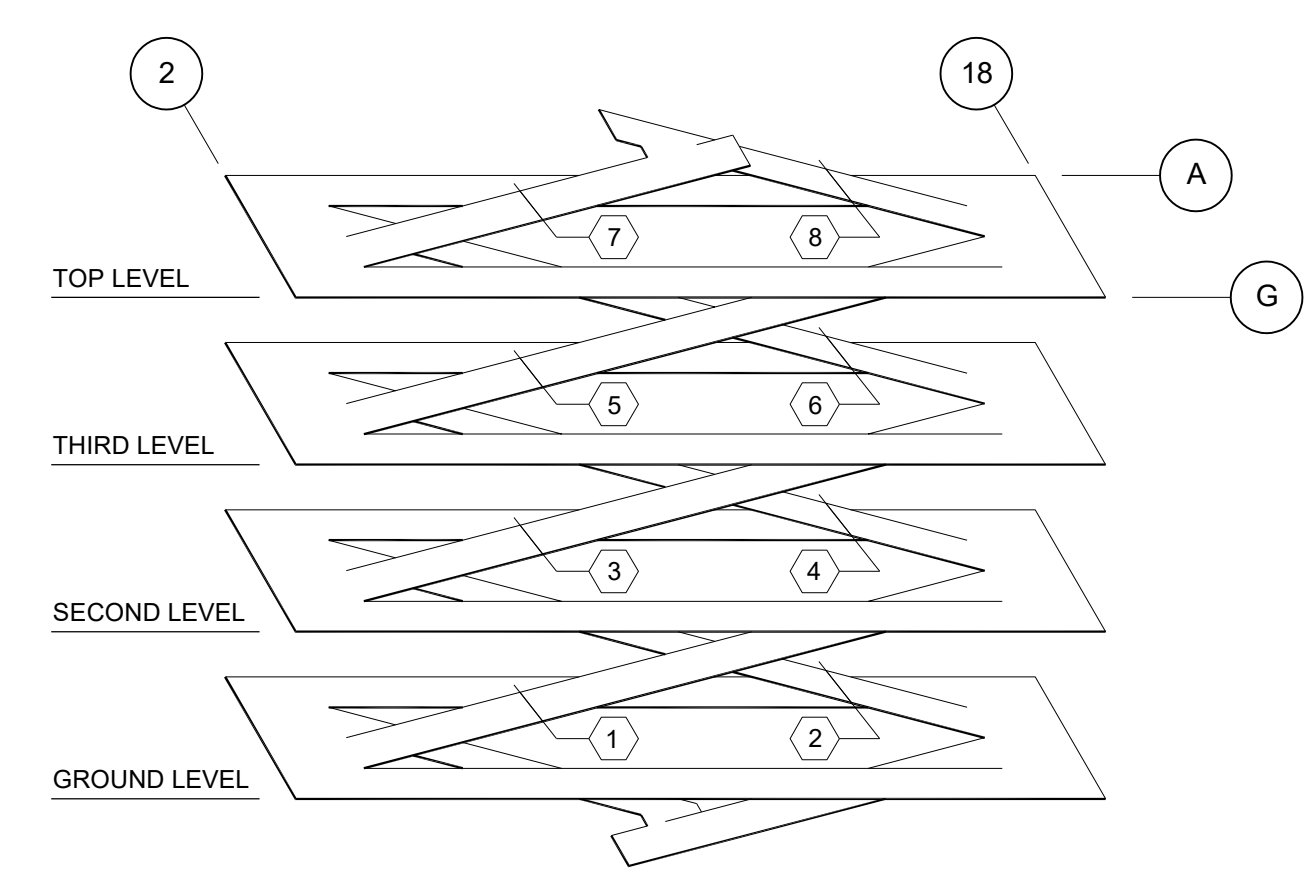
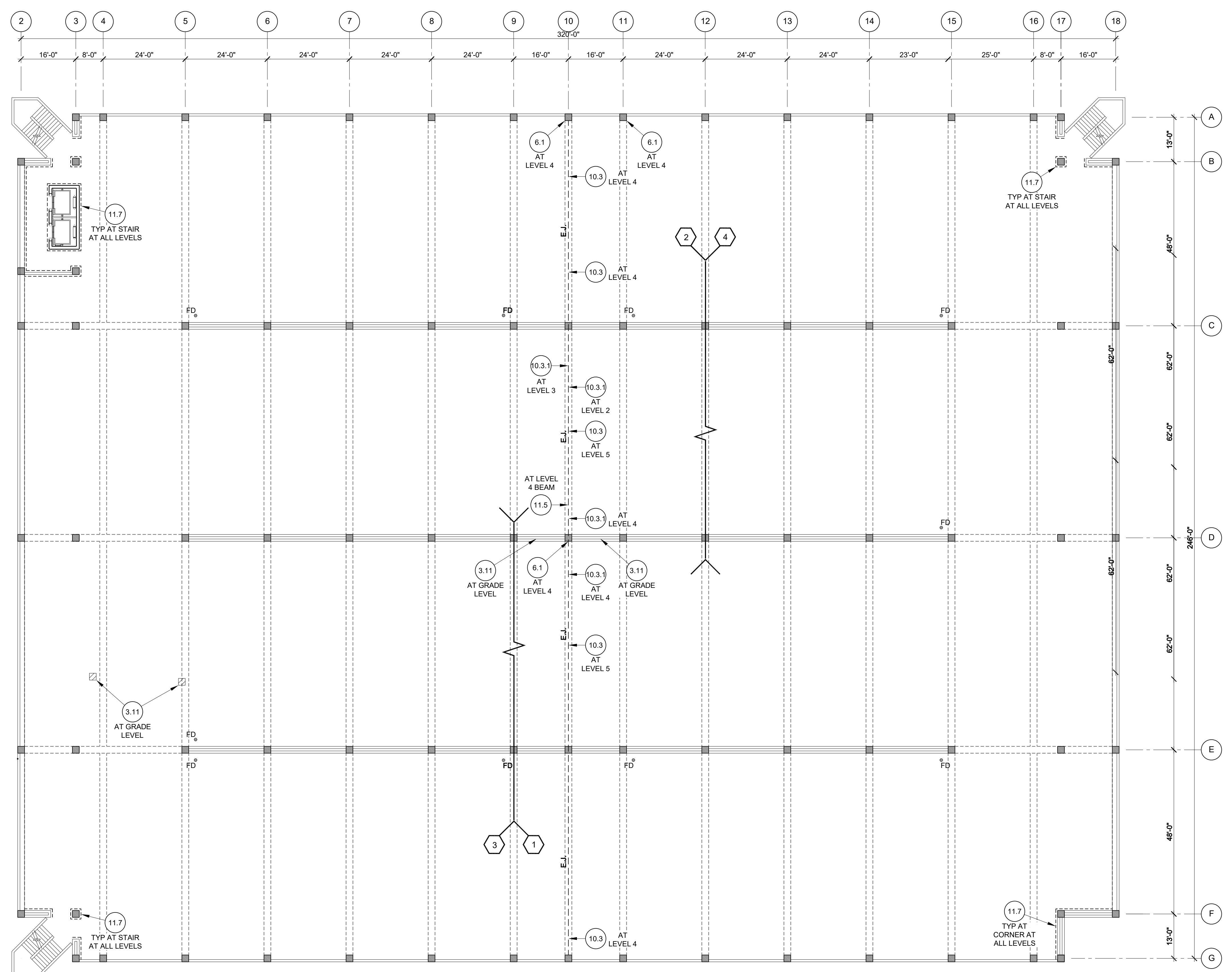


1 LEVEL 1 PLAN (OUTBOUND)
 RAMP 3 (WHARTON)
 SCALE: 1/16" = 1'-0"
 NORTH

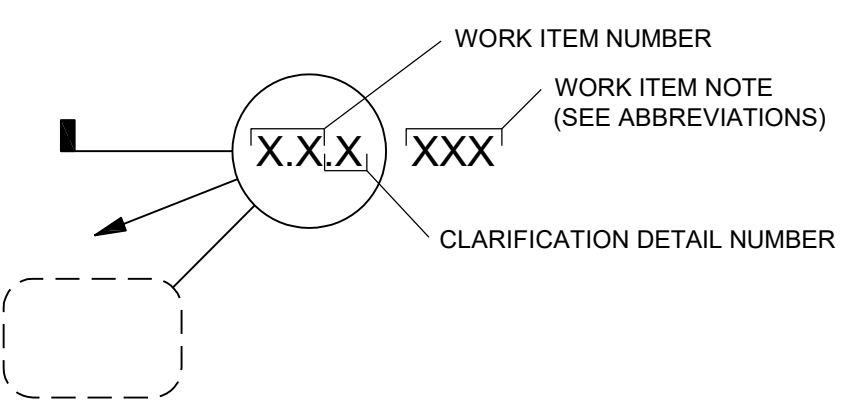
RAMP #3 (WHARTON CENTER) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
1.1	PROJECT MOBILIZATION	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	30
3.4	FLOOR REPAIR - CURBS / WALLS	SF	60
3.10	FLOOR REPAIR - STAR NOSING	SF	10
3.11	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	40
3.12	FLOOR REPAIR - SLAB-ON-GRADE RE-SLOPE SLAB	LS	1
4.1	CEILING REPAIR - PARTIAL DEPTH	SF	70
5.1	BEAM REPAIR - PARTIAL DEPTH	SF	60
6.1	COLUMN REPAIR - PARTIAL DEPTH	SF	10
7.1	WALL REPAIR - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	80
11.1	ROUT AND SEAL CRACKS	LF	600
11.38	COLUMN TO WALL JOINT SEALANT	LF	360
11.7	COVE SEALANTS	LF	20
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
45.5	PANT EXPOSED FIRE SUPPRESSION SYSTEM	LS	1
73.1	METAL FLASHING REPAIR	LS	1
76.3	TUCKPOINTING	LS	960
80.1	REMOVE AND REPLACE BRICK	EA	10
80.3	REMOVE AND REPLACE CMU	LF	20

CAUTION NOTE:
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- LEGEND:**
- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
 - = WI 4.1, 4.5 - CEILING REPAIR
 - = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
1. NOT ALL WORK ITEMS HAVE DETAILS.
 2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

1 TYPICAL LEVEL PLAN
 RAMP 5 (COMM ARTS)

- SHEET NOTES:**
1. REFER TO DRAWING R-001 FOR GENERAL NOTES.
 2. REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
 3. COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
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RAMP #5 (COMM ARTS) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
1.1	PROJECT MOBILIZATION	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-
3.11	FLOOR REPAIR - SLAB-ON-GRADE - PARTIAL DEPTH	SF	50
6.1	COLUMN REPAIR - PARTIAL DEPTH	SF	20
10.3	EXPANSION JOINT - ELASTOMERIC CONCRETE - REPLACE	LF	120
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	70
11.5	EPOXY INJECTION	EA	1
11.7	COVE SEALANTS	LF	1180

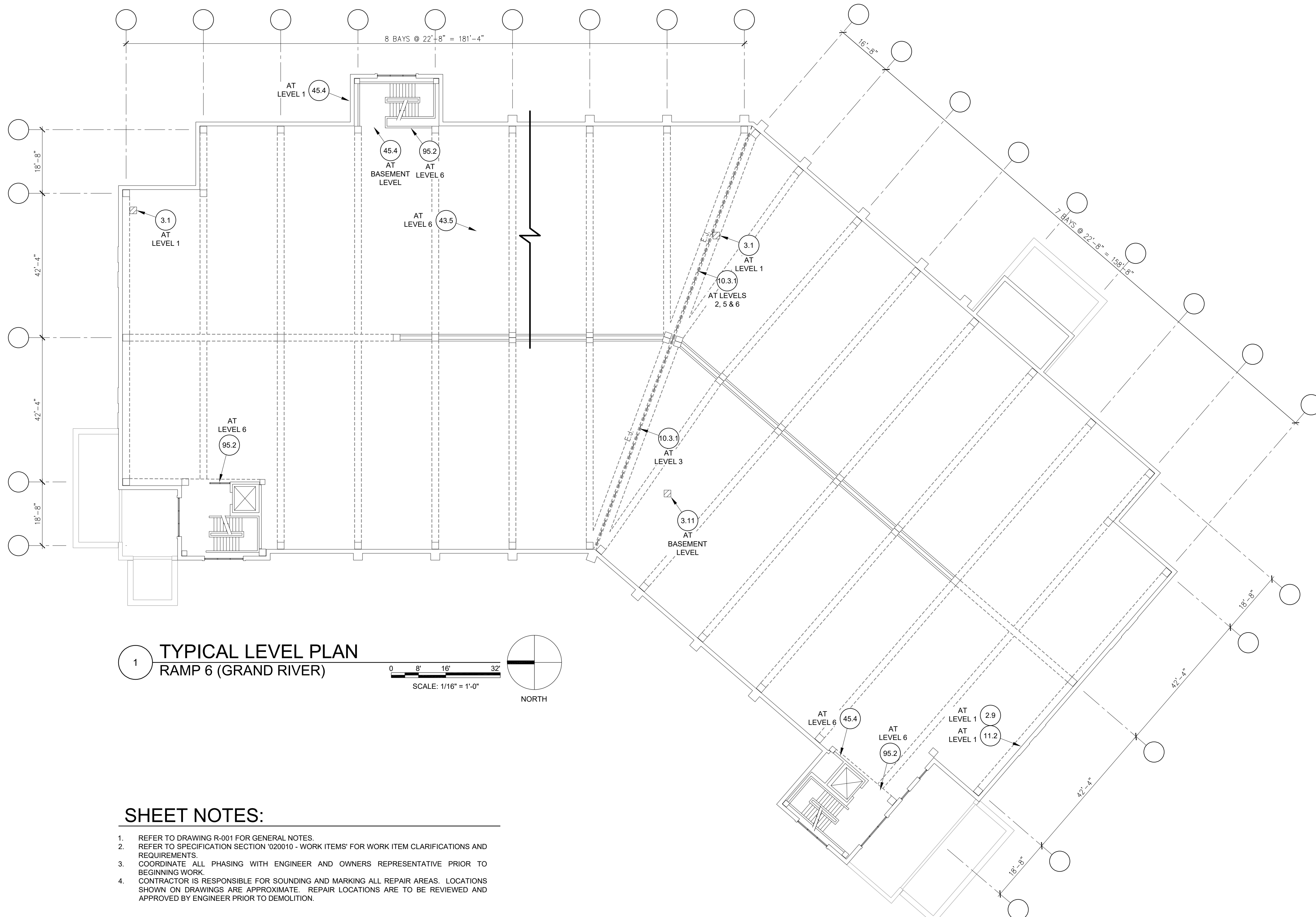
CAUTION NOTE:
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CAPITAL PROJ. NO.
 CP23098

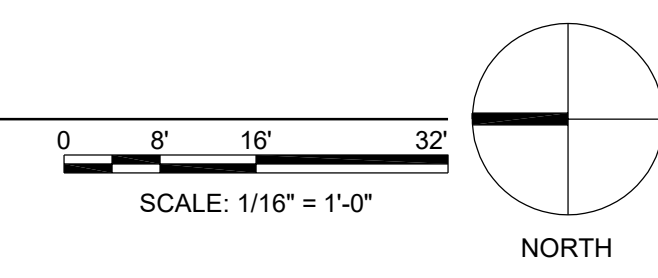
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ARCH.	N/A
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ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 5
 TYPICAL LEVEL PLAN

R-151



1 TYPICAL LEVEL PLAN
RAMP 6 (GRAND RIVER)

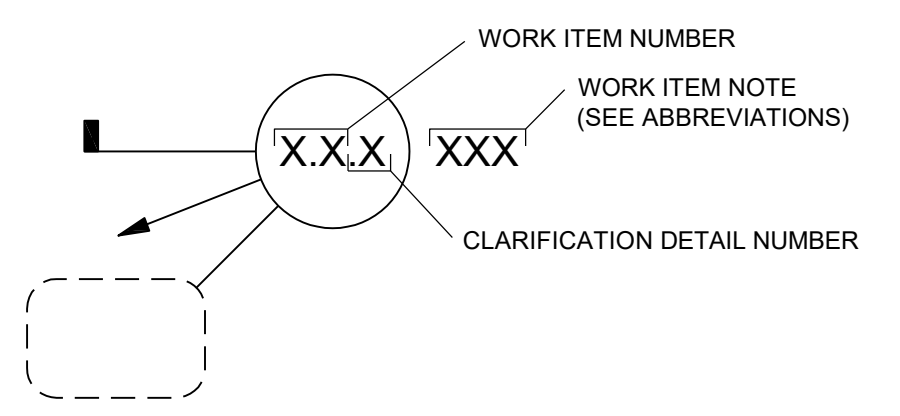


SHEET NOTES:

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- CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
- NOT ALL WORK ITEMS HAVE DETAILS.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

RAMP #6 (GRAND RIVER) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
11	PROJECT MOBILIZATION	LS	1
12	CONCRETE FORMWORK	INCIDENTAL	-
13	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
14	CONCRETE REINFORCEMENT	INCIDENTAL	-
15	TEMPORARY SIGNAGE	INCIDENTAL	-
29	GRIND SLAB EDGE	LF	40
31	FLOOR REPAIR - PARTIAL DEPTH	SF	20
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	100
11.2	JOINT SEALANT	LF	30
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-
43.5	GATE REPAIR	LS	1
45.4	PAINT DOORS AND FRAMES	EA	3
95.2	WINDOW GLAZING - SILICONE	LF	150

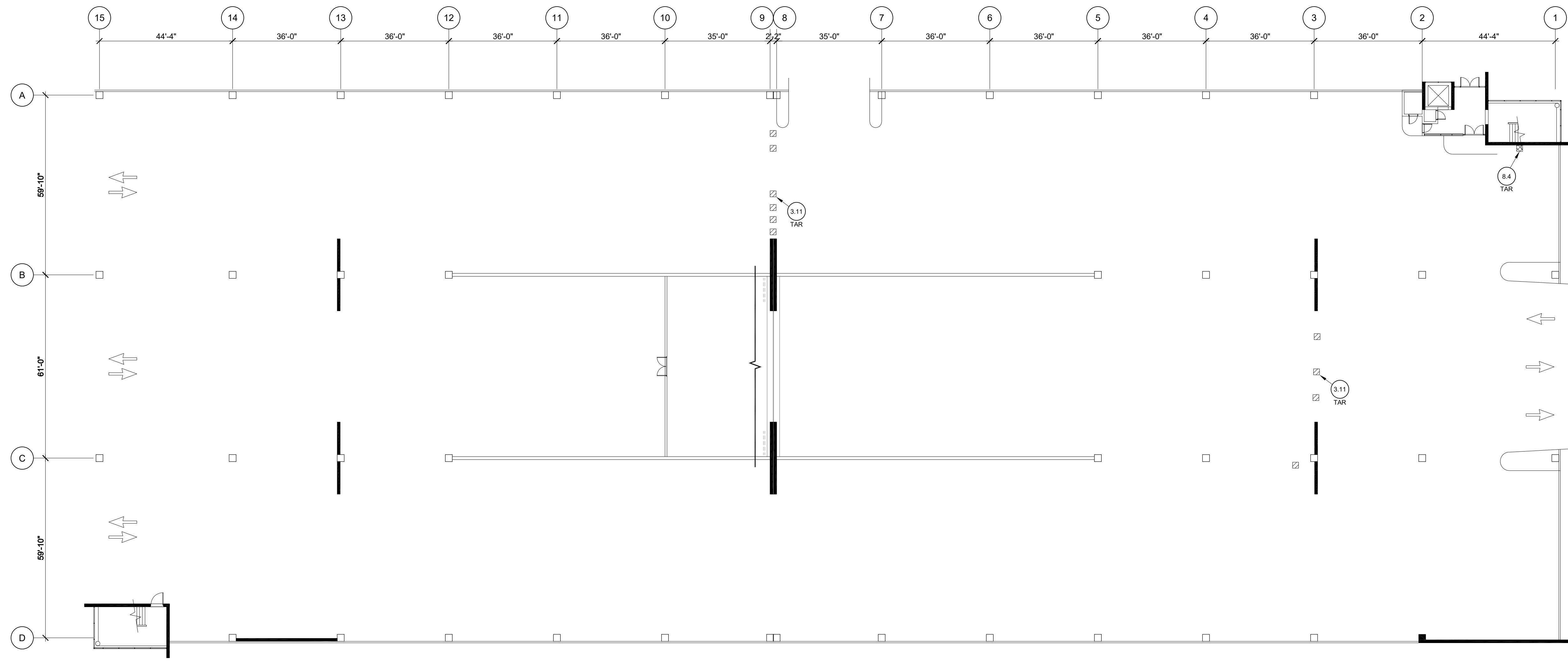
CAUTION NOTE:
 THE FLOOR SLAB HAS POST-TENSIONING TENDONS. THESE TENDONS ARE NEAR THE FLOOR SURFACE AT SPALLS AND DELAMINATIONS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN SAW-CUTTING SO AS NOT TO DAMAGE EXISTING TENDONS OR TENDON SHEATHS. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. CHIPPING WITH 15 LB HAMMERS SHALL BE USED IN LIEU OF SAW-CUTTING NEAR SHALLOW TENDONS.

CAPITAL PROJ. NO.
 CP23098

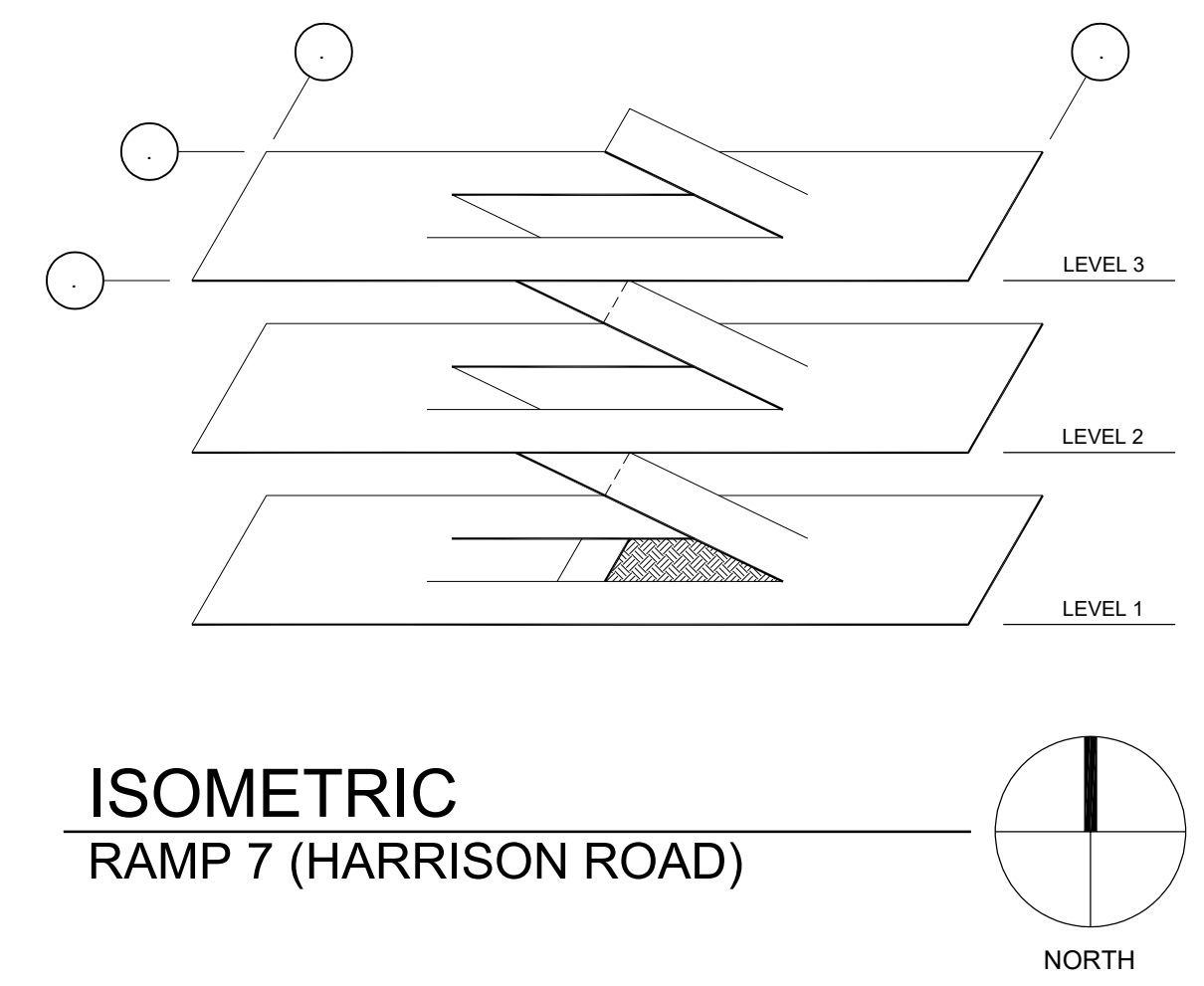
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 ARCH. _____ N/A
 MECH. _____ N/A
 ELEC. _____ N/A
 CIVIL _____ SML
 L.A. _____ N/A
 REP. _____ AL
 APPR. _____ MSG
 DATE 03/11/2024
 SCALE AS SHOWN
 REVISIONS _____

RAMP NO. 6
 TYPICAL LEVEL PLAN

R-161



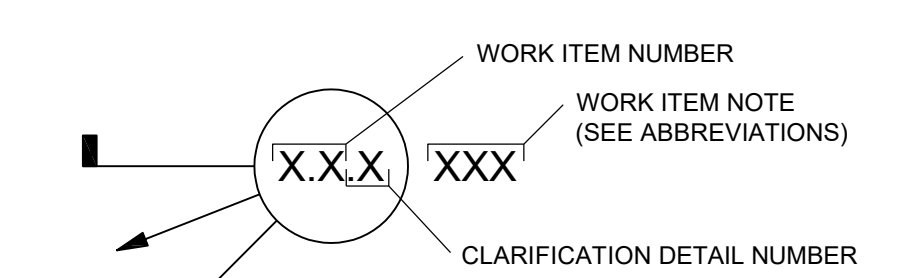
1 LEVEL 1 PLAN
 RAMP 7 (HARRISON ROAD)
 SCALE: 1" = 20'-0"
 NORTH



ISOMETRIC
 RAMP 7 (HARRISON ROAD)
 NORTH

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
- NOT ALL WORK ITEMS HAVE DETAILS.
 - SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SHEET NOTES:

- REFER TO DRAWING R-001 FOR GENERAL NOTES.
- REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
- COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.
- WORK ITEM 16.1 - CONTRACTOR SHALL PROVIDE NEW FULL SYSTEM TRAFFIC TOPPING WHERE CONCRETE SLAB REPAIRS FALL WITHIN AREAS OF EXISTING COATING, INCIDENTAL.

RAMP #7 (HARRISON) WORK ITEM TABLE

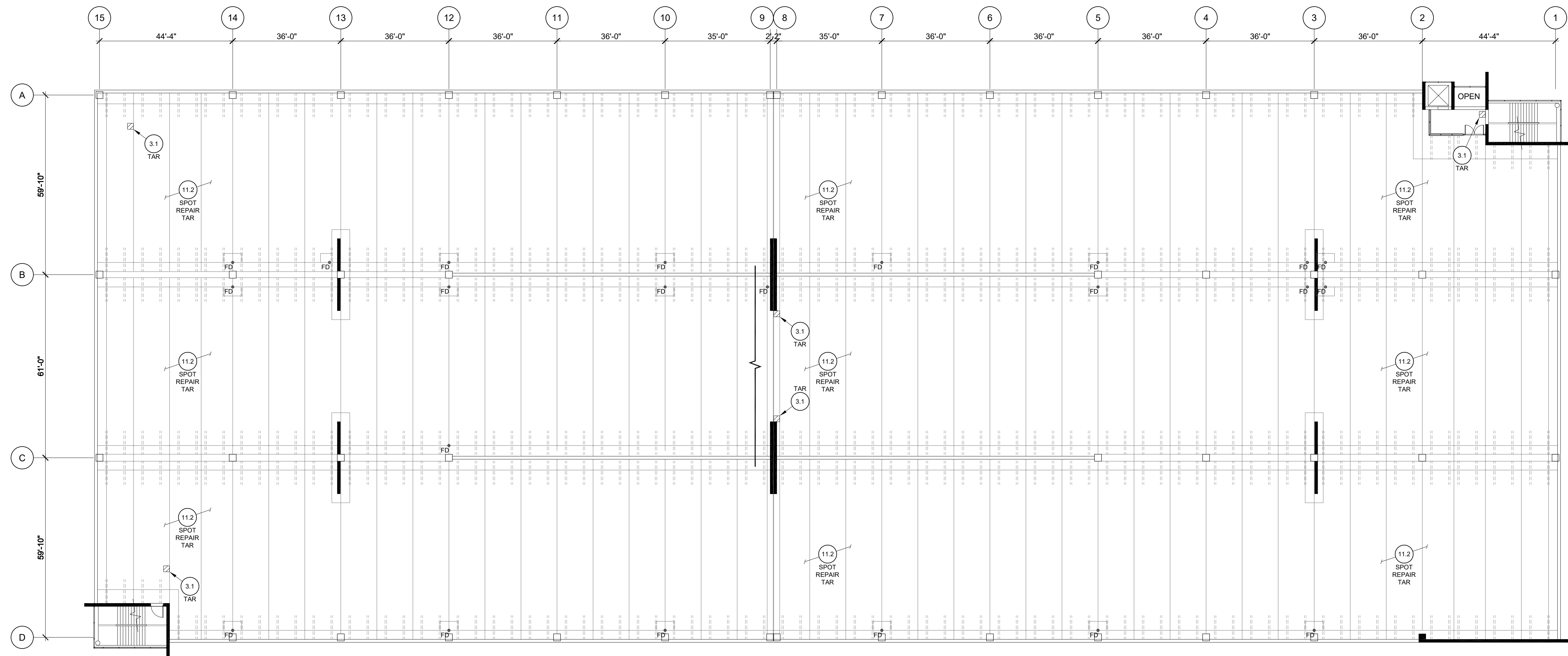
WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
1.1	PROJECT MOBILIZATION	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-
2.9	GRIND SLAB EDGE	LF	10
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	90
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	10
8.4	TEE FLANGE REPAIR - FULL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	50
11.1	ROUT AND SEAL CRACKS	LF	500
11.2	JOINT SEALANTS	LF	1260
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-

CAPITAL PROJ. NO.
 CP23098

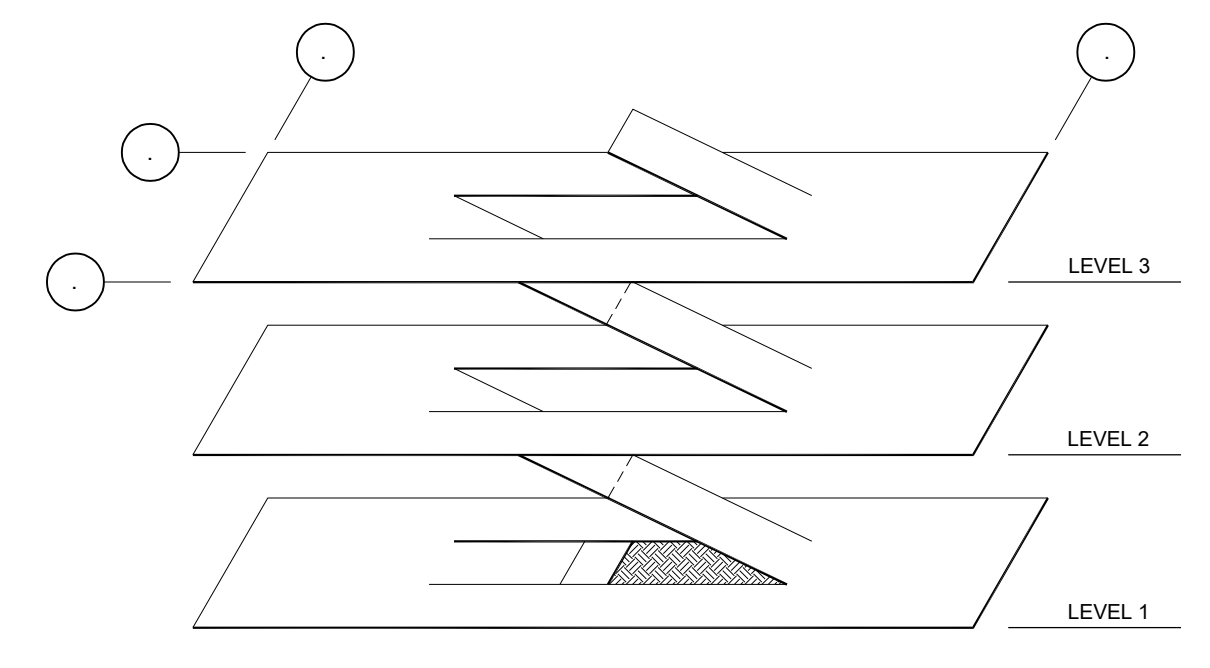
LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 7
 LEVEL 1 PLAN

R-171



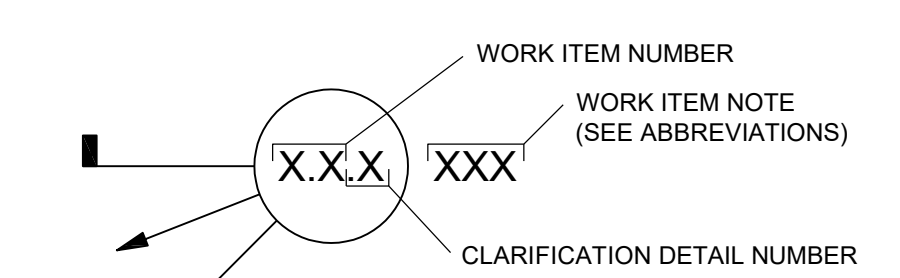
1 LEVEL 2 PLAN
RAMP 7 (HARRISON ROAD)
 SCALE: 1" = 20'-0"



ISOMETRIC
RAMP 7 (HARRISON ROAD)
 NORTH

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
1. NOT ALL WORK ITEMS HAVE DETAILS.
 2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SHEET NOTES:

1. REFER TO DRAWING R-001 FOR GENERAL NOTES.
2. REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
3. COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
4. CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.
5. WORK ITEM 11.2 - SPOT REPAIR TEE-TO-TEE AND WASH JOINT SEALANTS WHERE LEAKING OR FAILED AT THE FIRST SUPPORTED LEVEL, WITHIN QUANTITY INDICATED IN THE BID. COORDINATE REPAIR LOCATIONS WITH ENGINEER IN THE FIELD.

RAMP #7 (HARRISON) WORK ITEM TABLE

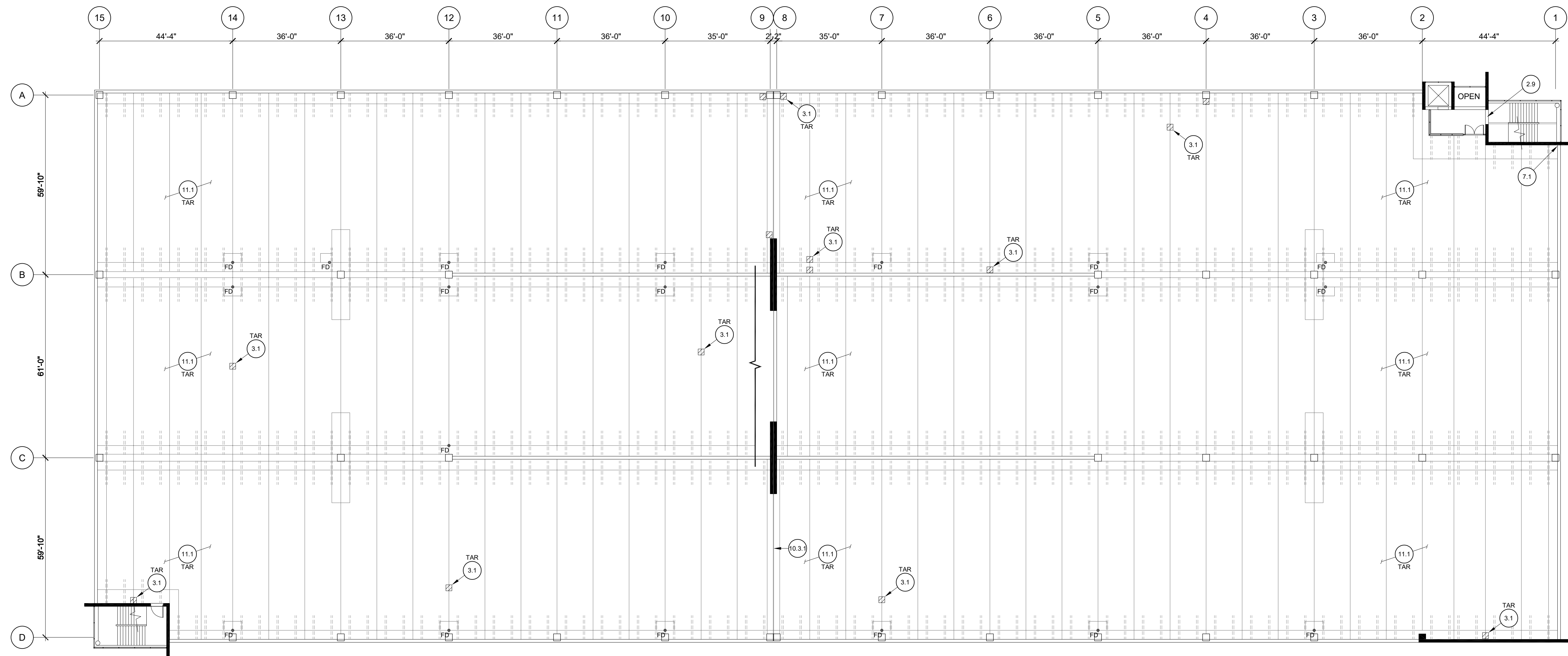
WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
1.1	PROJECT MOBILIZATION	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-
2.9	GRIND SLAB EDGE	LF	10
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	90
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	10
8.4	TEE FLANGE REPAIR - FULL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	50
11.1	ROUT AND SEAL CRACKS	LF	500
11.2	JOINT SEALANTS	LF	1260
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-

CAPITAL PROJ. NO.
 CP23098

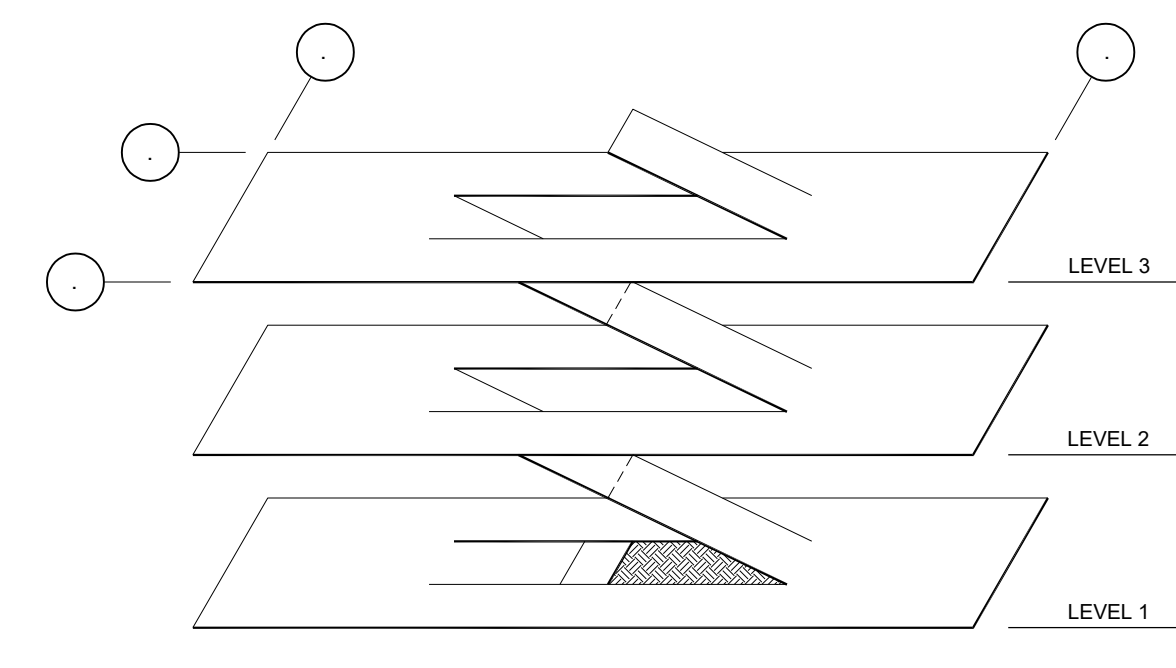
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ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

RAMP NO. 7
 LEVEL 2 PLAN

R-172



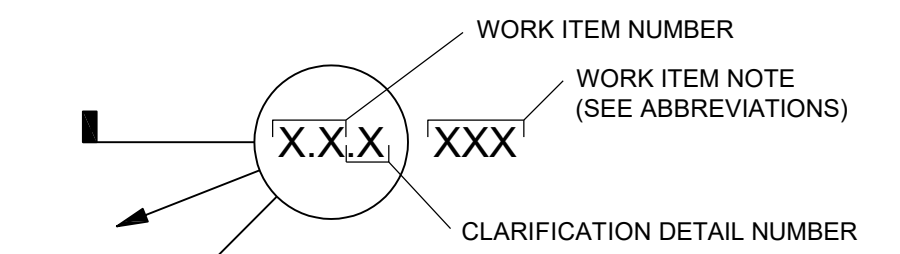
1 LEVEL 3 PLAN
RAMP 7 (HARRISON ROAD)
 SCALE: 1" = 20'-0"



ISOMETRIC
RAMP 7 (HARRISON ROAD)
 NORTH

LEGEND:

- = WI 3.1, 3.2, 3.3, 3.11 - FLOOR REPAIR
- = WI 4.1, 4.5 - CEILING REPAIR
- = WI 16.4 - TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM



- NOTES:**
1. NOT ALL WORK ITEMS HAVE DETAILS.
 2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SHEET NOTES:

1. REFER TO DRAWING R-001 FOR GENERAL NOTES.
2. REFER TO SPECIFICATION SECTION '020010 - WORK ITEMS' FOR WORK ITEM CLARIFICATIONS AND REQUIREMENTS.
3. COORDINATE ALL PHASING WITH ENGINEER AND OWNERS REPRESENTATIVE PRIOR TO BEGINNING WORK.
4. CONTRACTOR IS RESPONSIBLE FOR SOUNDING AND MARKING ALL REPAIR AREAS. LOCATIONS SHOWN ON DRAWINGS ARE APPROXIMATE. REPAIR LOCATIONS ARE TO BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO DEMOLITION.
5. WORK ITEM 16.1 - CONTRACTOR SHALL PROVIDE NEW FULL SYSTEM TRAFFIC TOPPING WHERE CONCRETE SLAB REPAIRS FALL WITHIN AREAS OF EXISTING COATING, INCIDENTAL.

RAMP #7 (HARRISON) WORK ITEM TABLE

WORK ITEM	DESCRIPTION	UNITS	BID QUANTITY
1.1	PROJECT MOBILIZATION	LS	1
1.2	CONCRETE FORMWORK	INCIDENTAL	-
1.3	CONCRETE SHORES AND RESHORES	INCIDENTAL	-
1.4	CONCRETE REINFORCEMENT	INCIDENTAL	-
1.5	TEMPORARY SIGNAGE	INCIDENTAL	-
2.9	GRIND SLAB EDGE	LF	10
3.1	FLOOR REPAIR - PARTIAL DEPTH	SF	90
3.11	FLOOR REPAIR SLAB-ON-GRADE - PARTIAL DEPTH	SF	30
7.1	WALL REPAIR - PARTIAL DEPTH	SF	10
8.4	TEE FLANGE REPAIR - FULL DEPTH	SF	10
10.3.1	EXPANSION JOINT - ELASTOMERIC CONCRETE - NOSING REPAIR	LF	50
11.1	ROUT AND SEAL CRACKS	LF	500
11.2	JOINT SEALANTS	LF	1260
16.1	TRAFFIC TOPPING - VEHICULAR - FULL SYSTEM	INCIDENTAL	-

CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

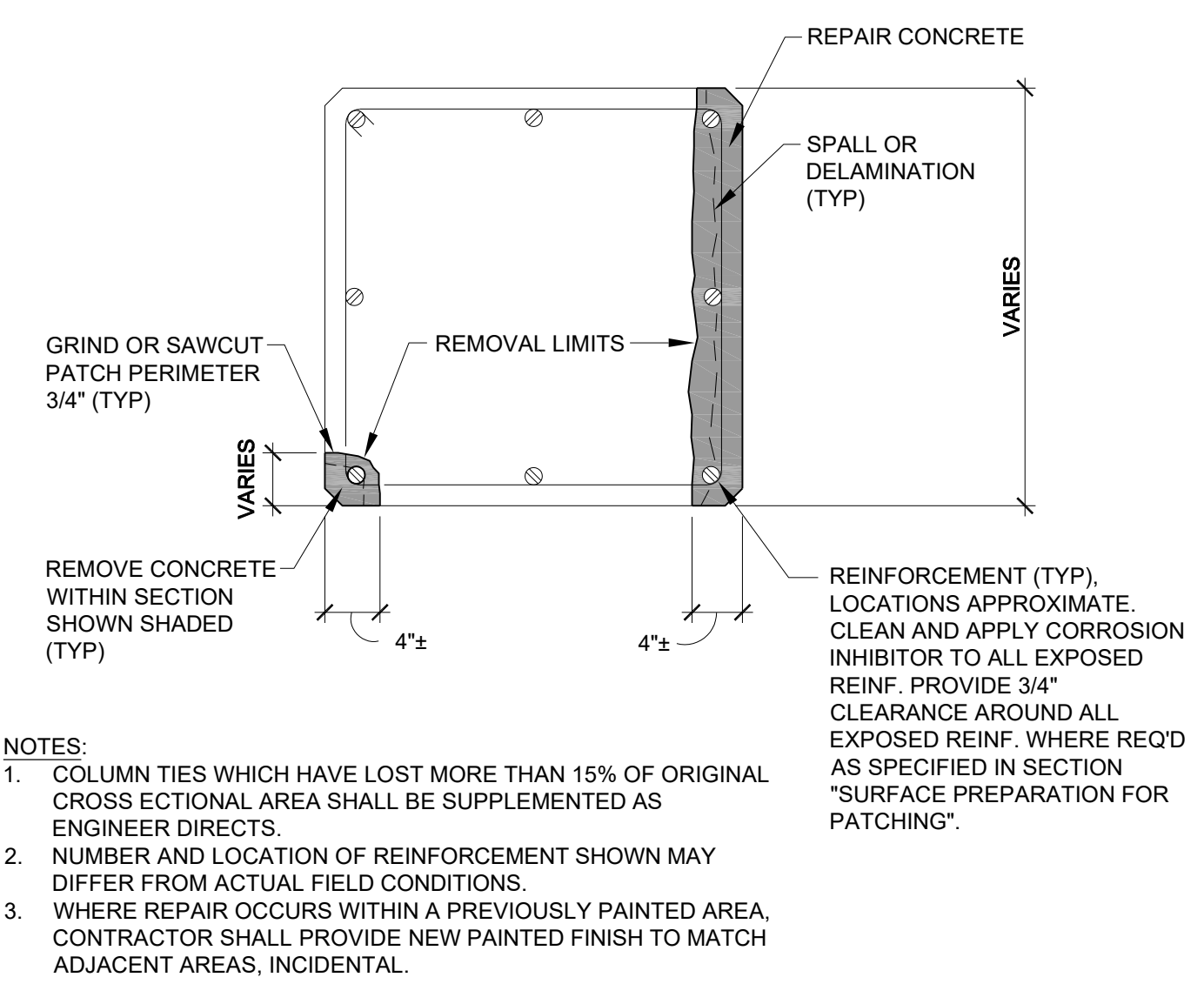
RAMP NO. 7
 LEVEL 3 PLAN

R-173

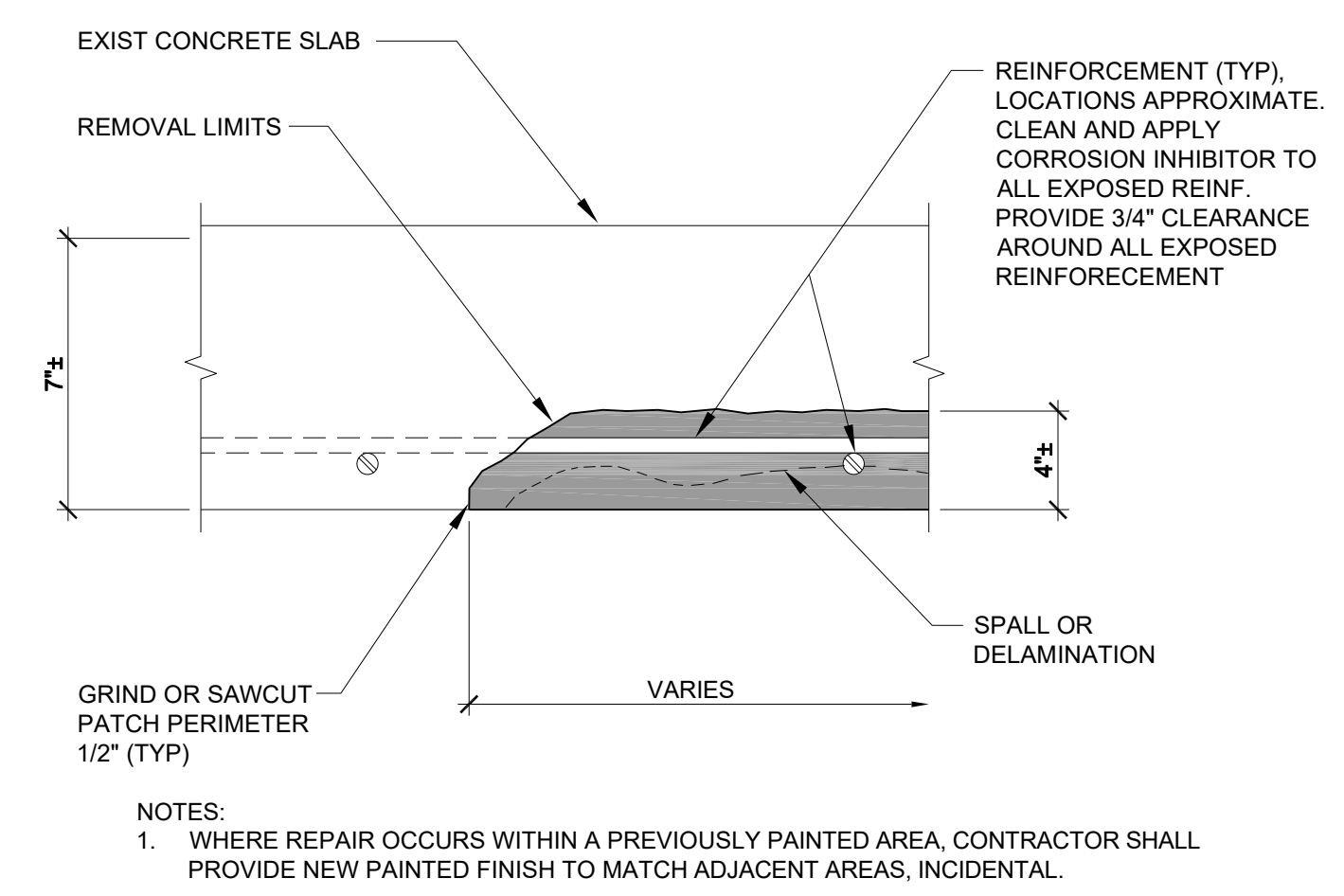
CAPITAL PROJ. NO.
CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

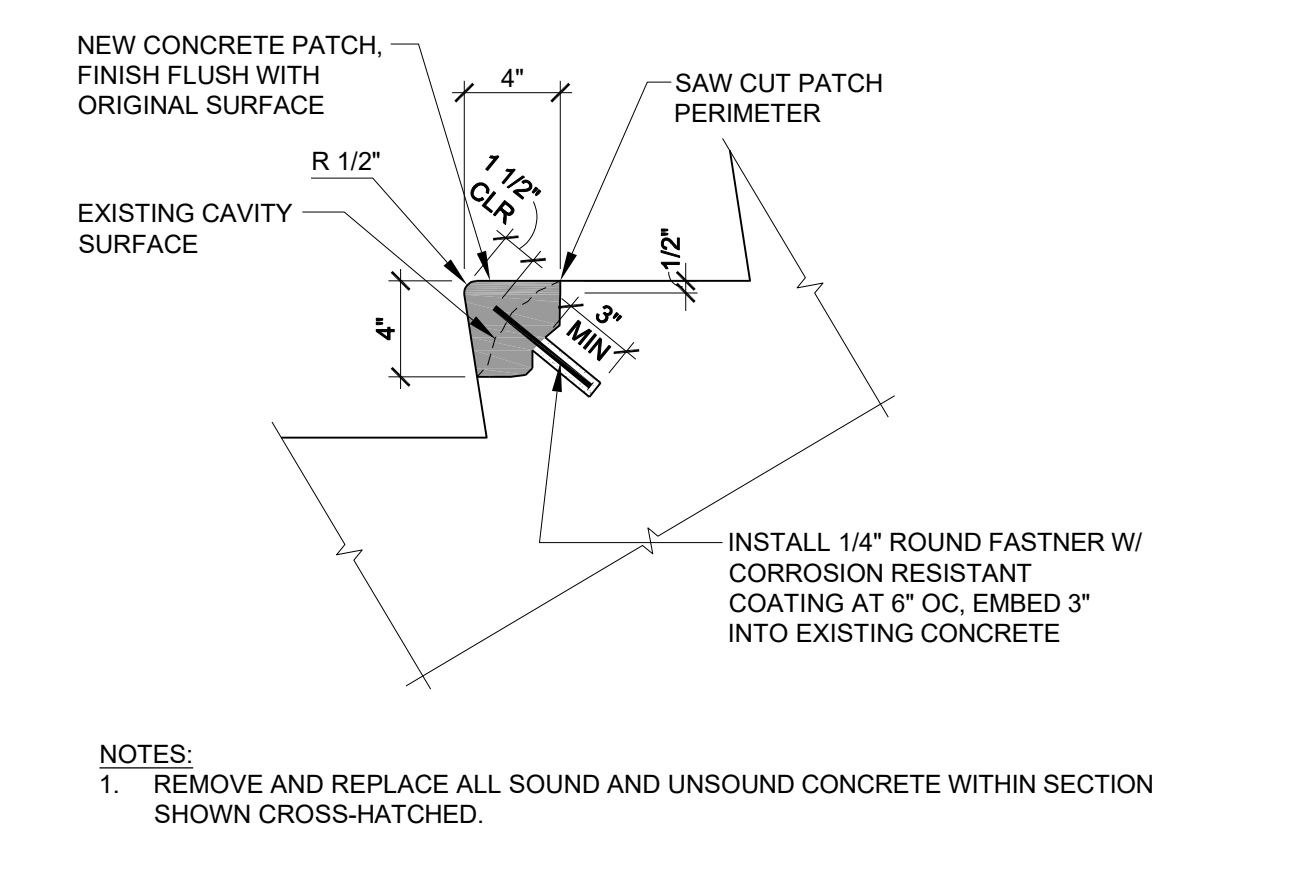
REPAIR DETAILS



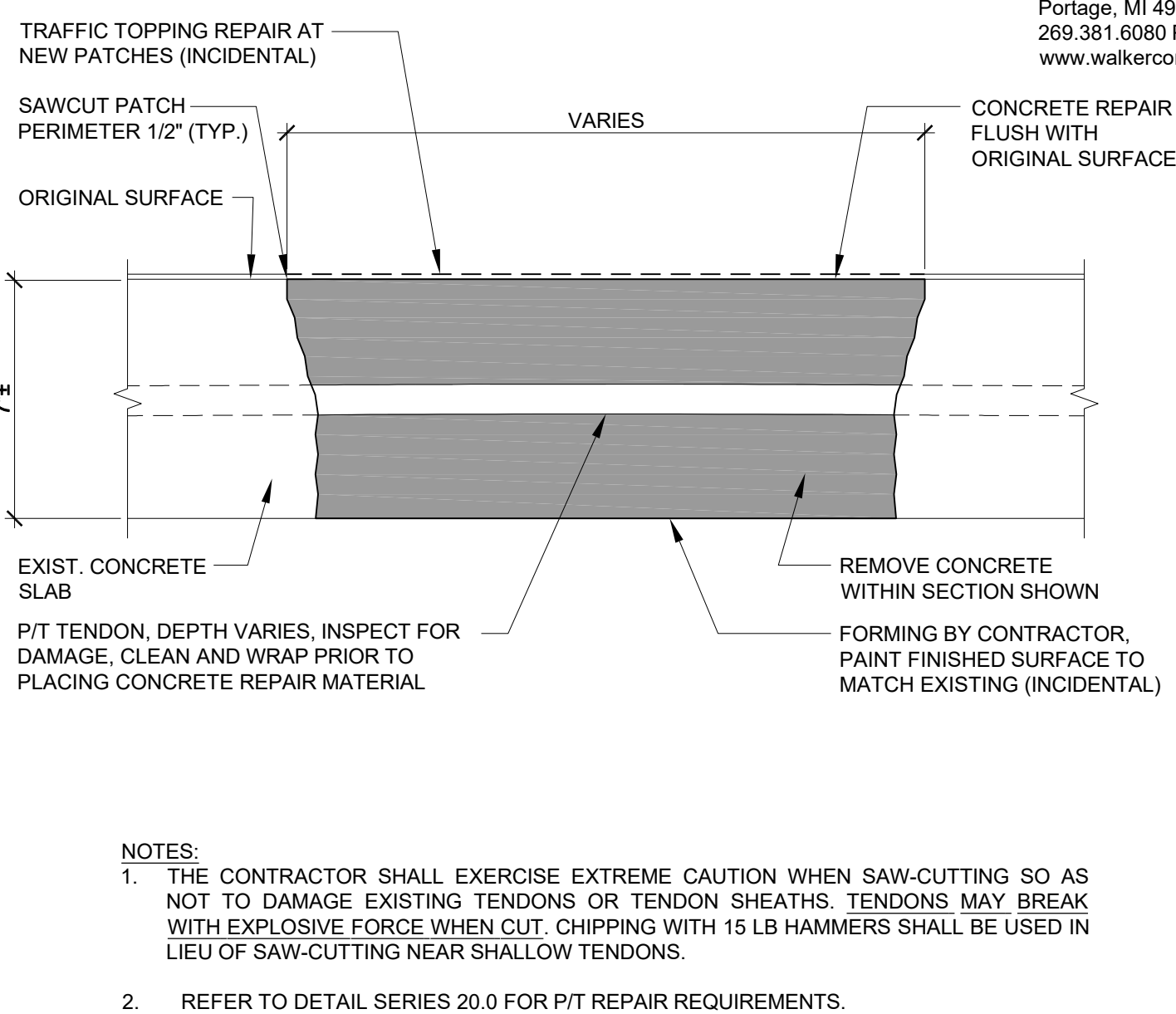
6.1 COLUMN REPAIR-PARTIAL DEPTH



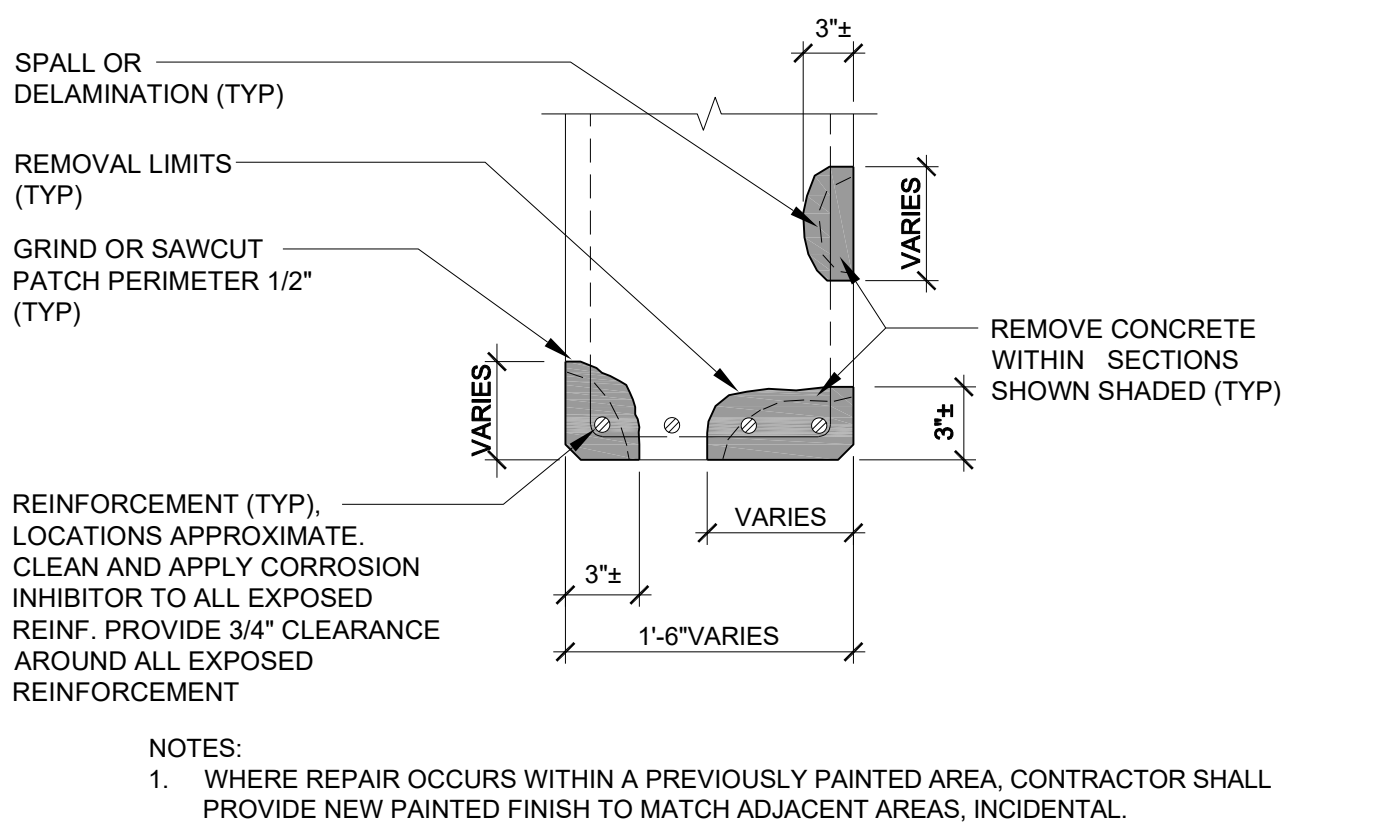
4.1 CEILING REPAIR-PARTIAL DEPTH



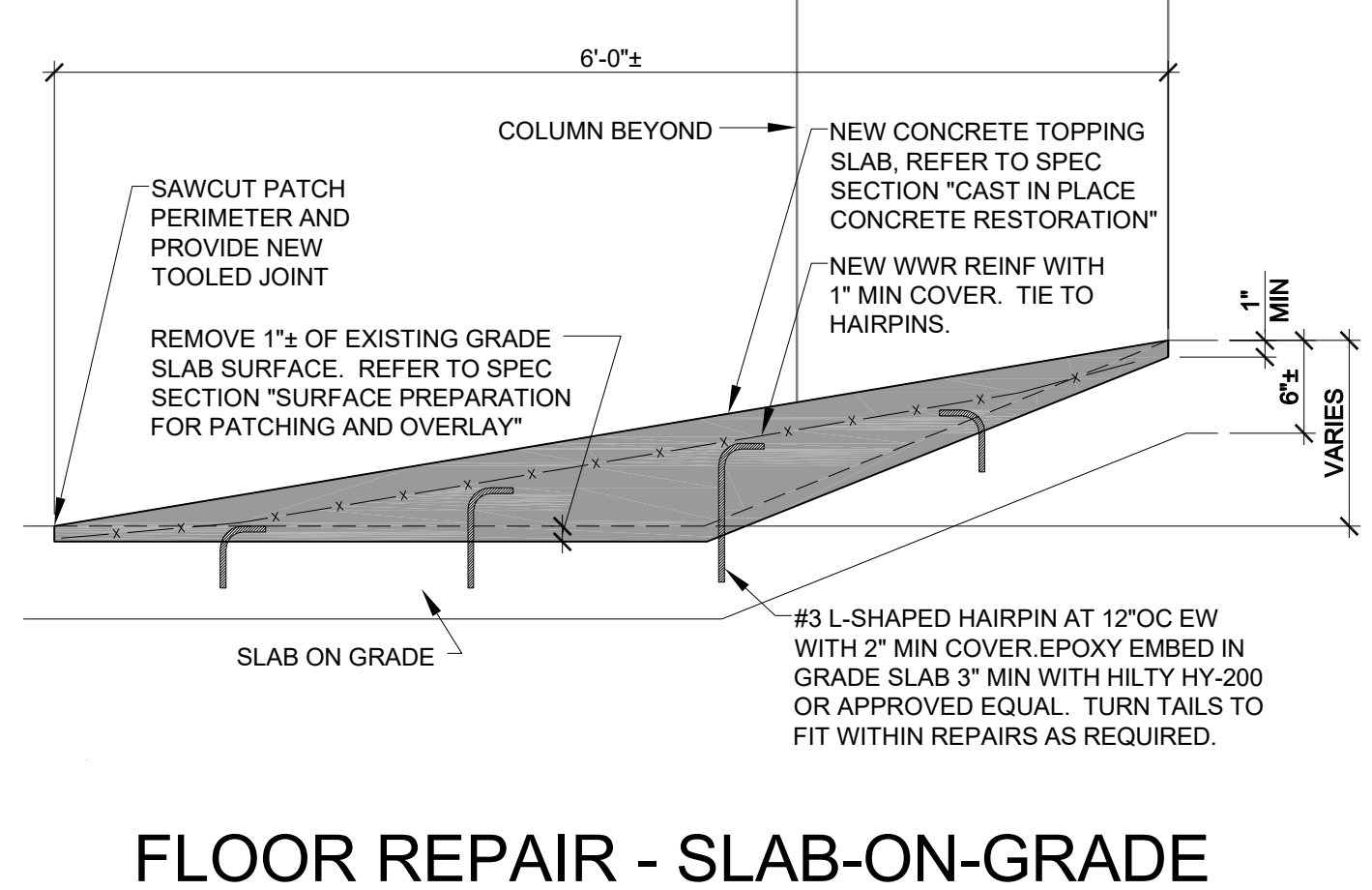
3.10 FLOOR REPAIR - STAIR NOSING



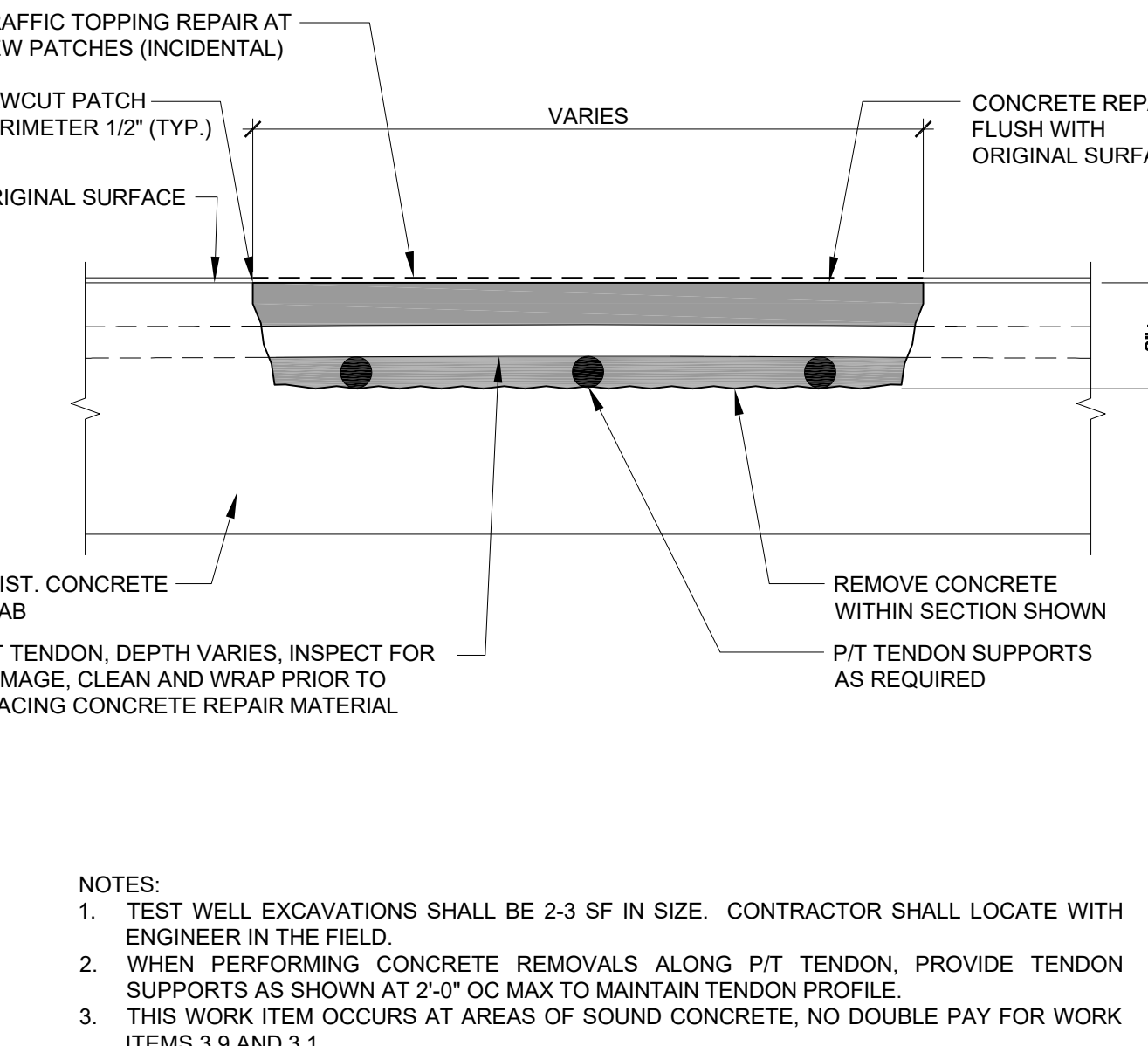
3.3 FLOOR REPAIR - FULL DEPTH



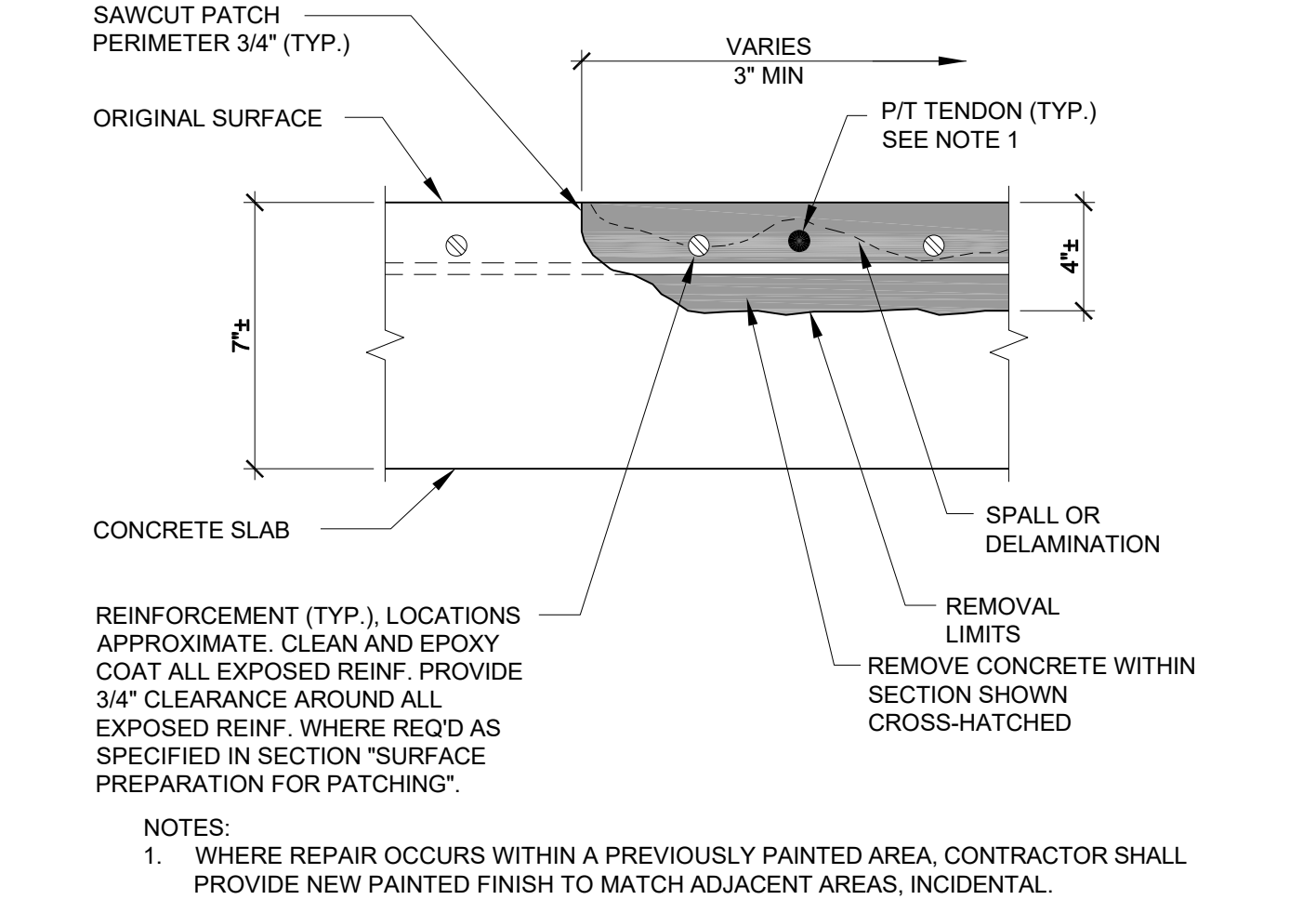
5.1 BEAM REPAIR-PARTIAL DEPTH



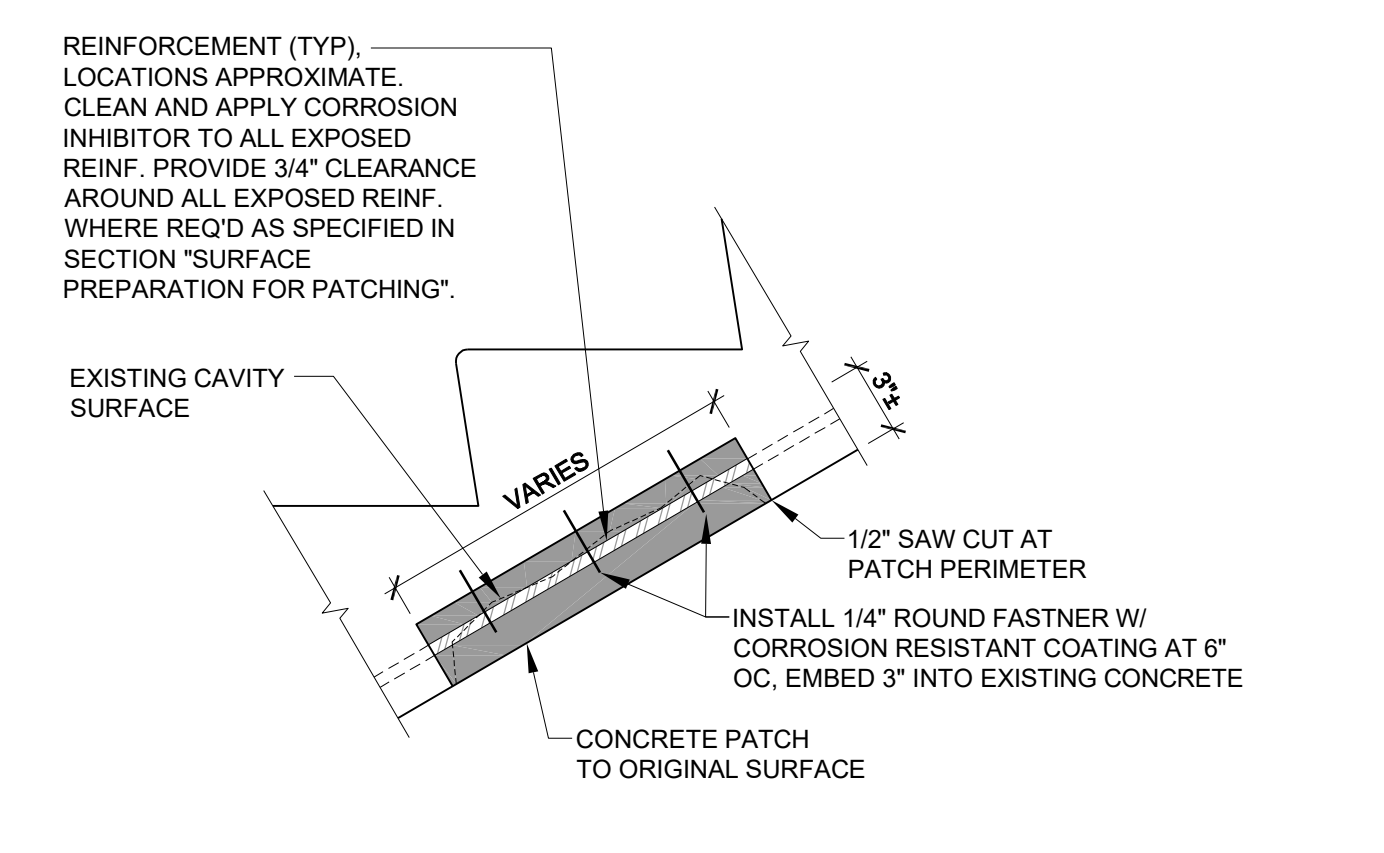
3.12 FLOOR REPAIR - SLAB-ON-GRADE RE-SLOPE SLAB



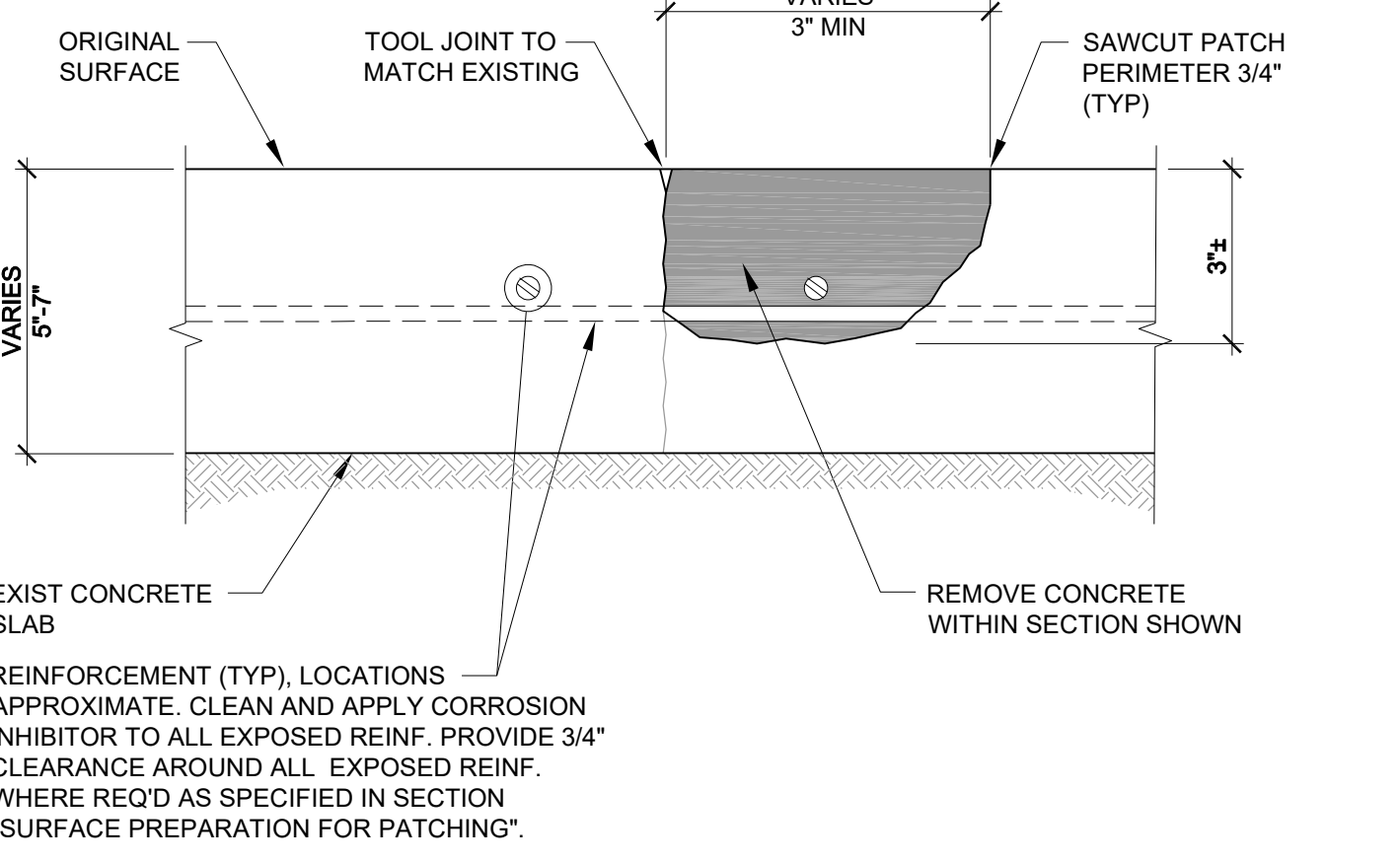
3.9 PARTIAL DEPTH TEST OPENING



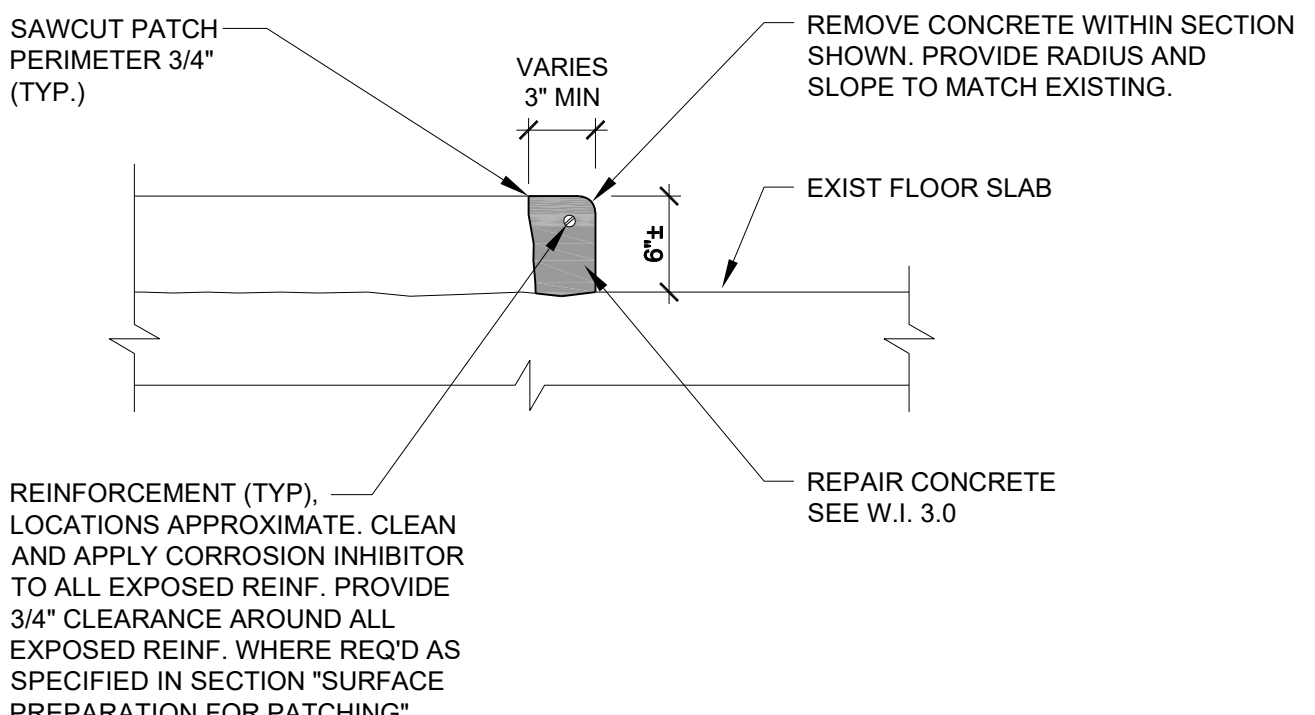
3.1 FLOOR REPAIR - PARTIAL DEPTH



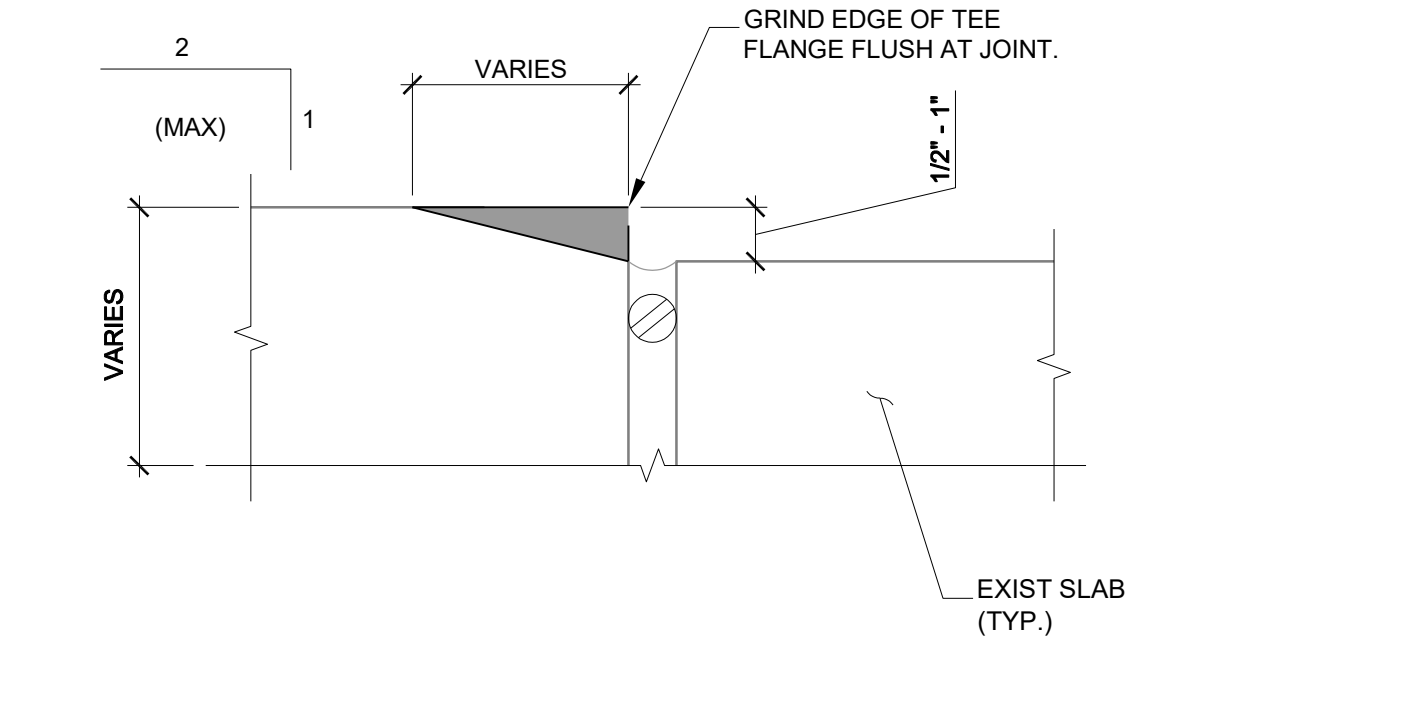
4.5 STAIR CEILING REPAIR - PARTIAL DEPTH



3.11 FLOOR REPAIR - SLAB ON GRADE - PARTIAL DEPTH

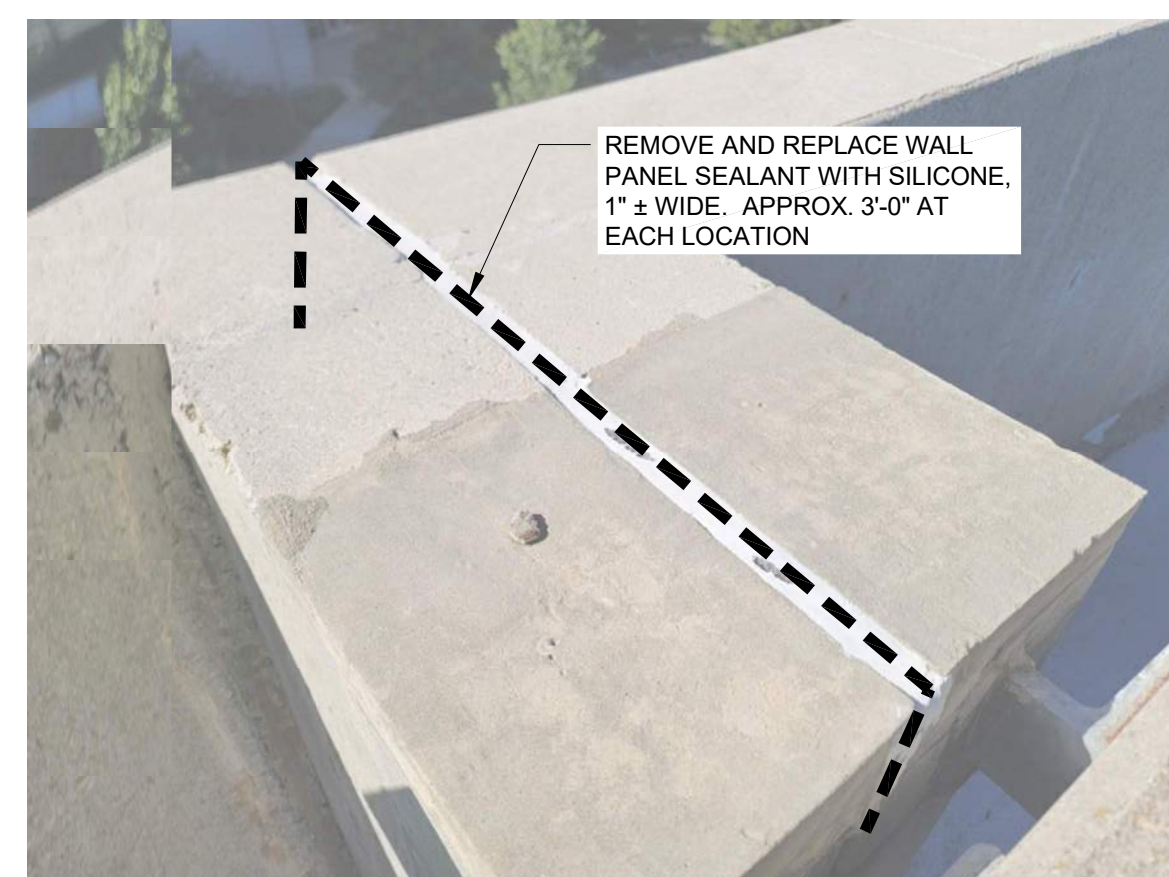


3.4 FLOOR REPAIR-CURBS/WALKS

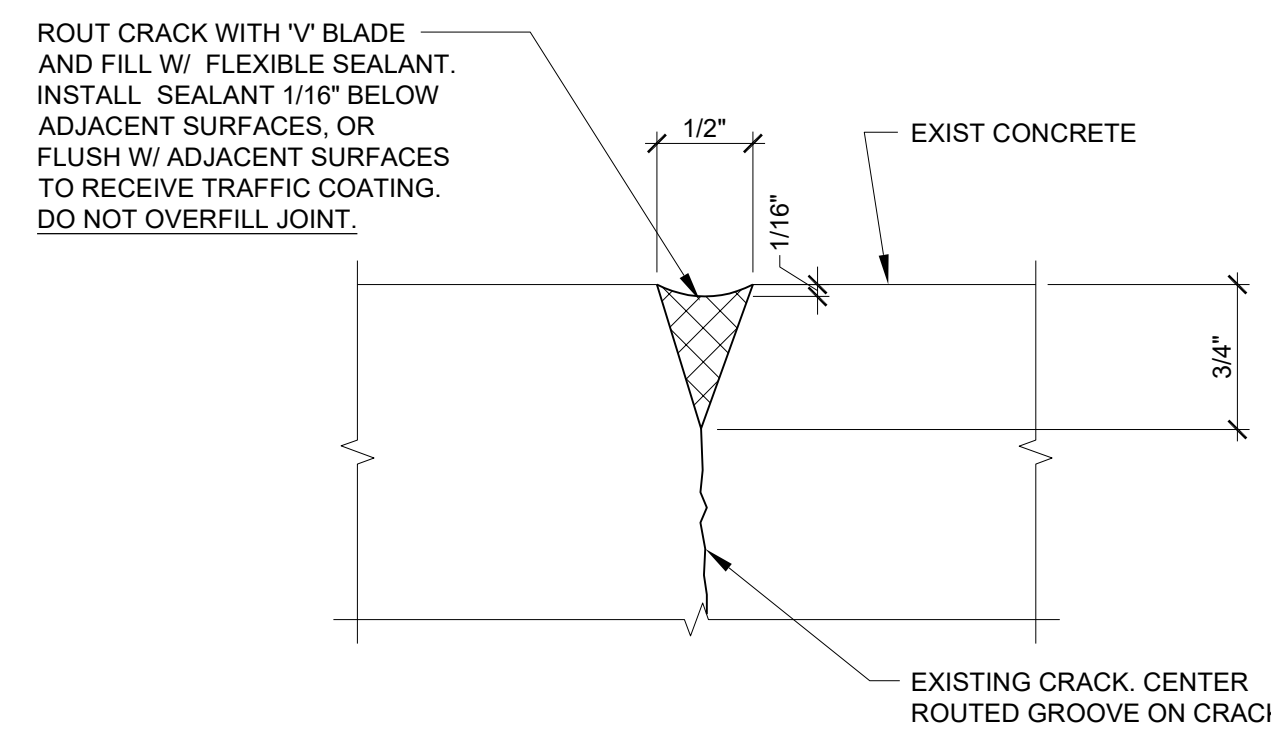


2.9 GRIND SLAB EDGE

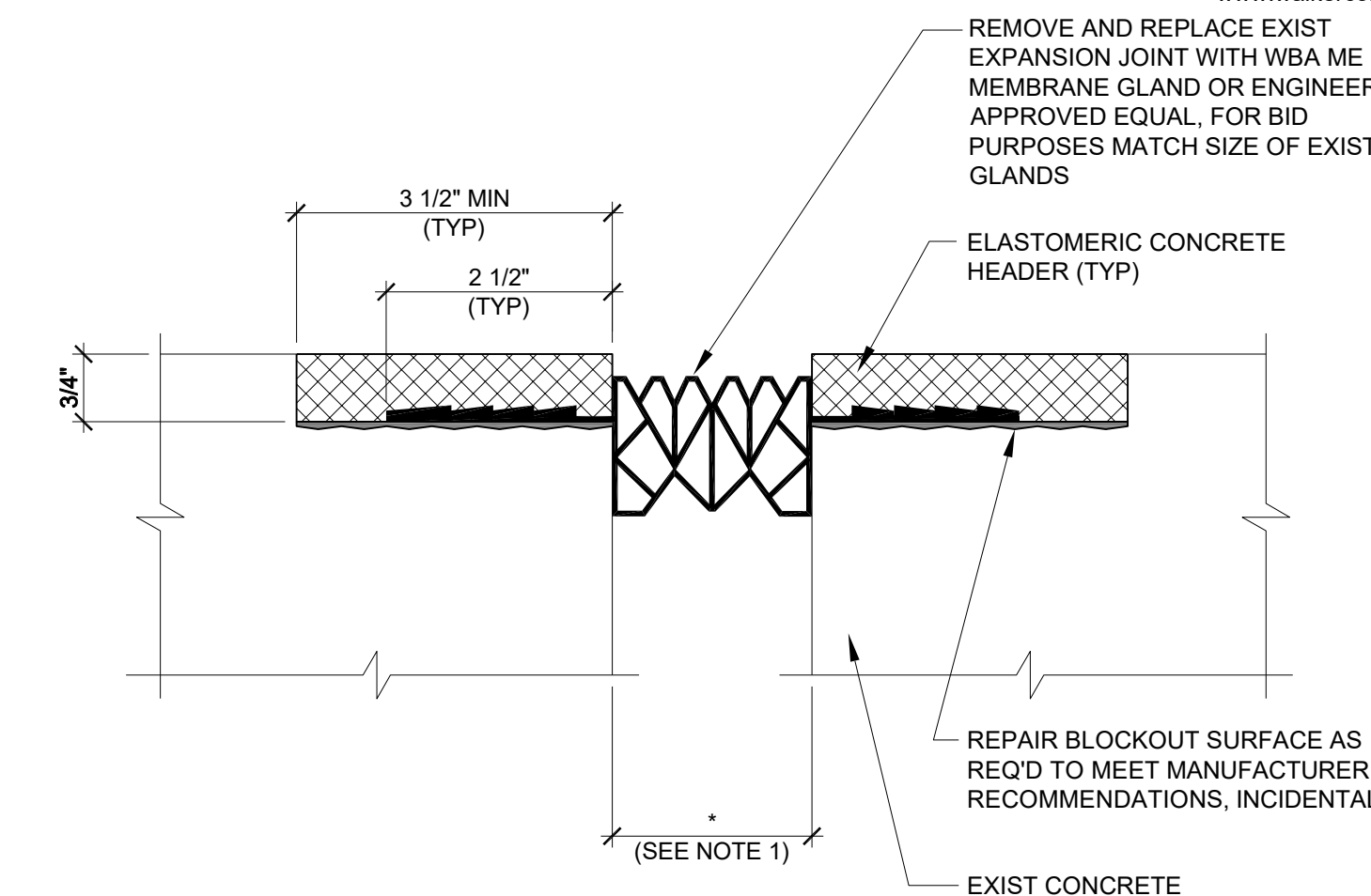
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11.3A WALL PANEL JOINT SEALANT (REFERENCE)

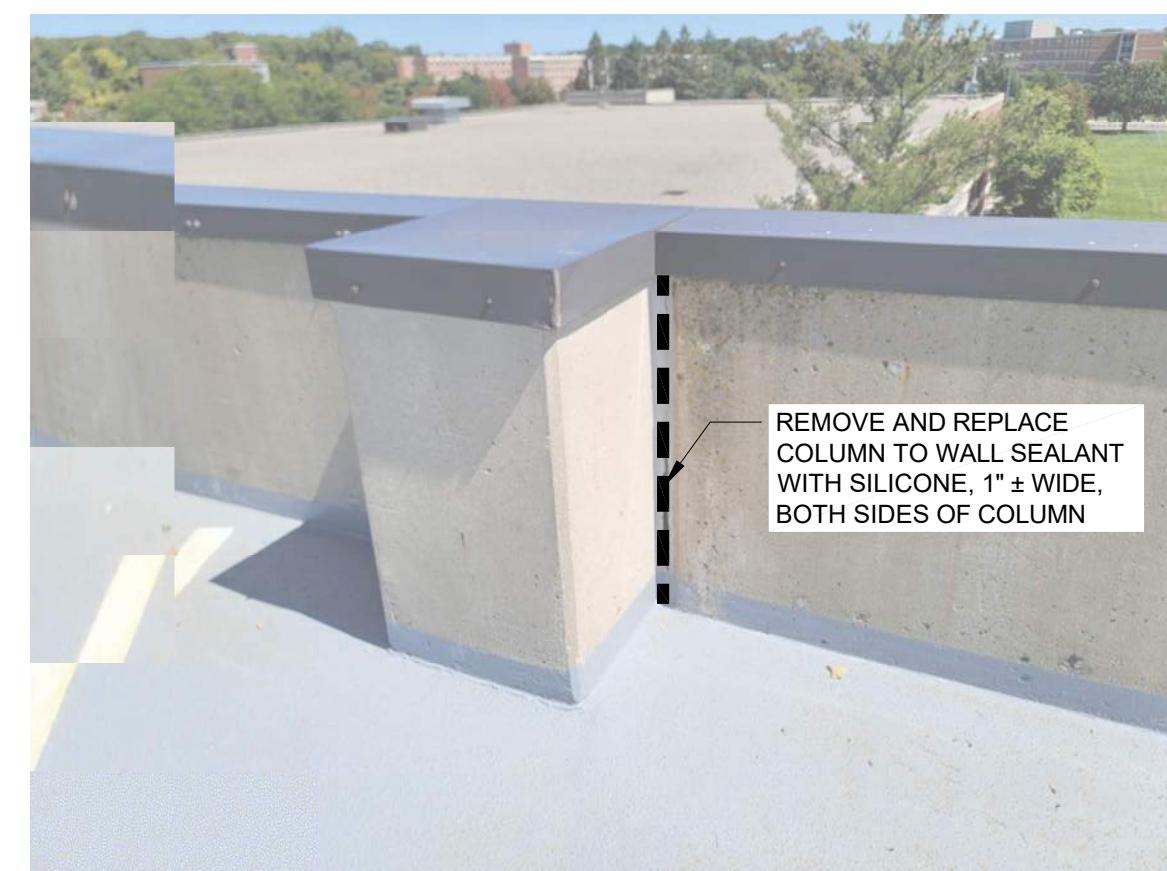


11.1 ROUT & SEAL CRACKS

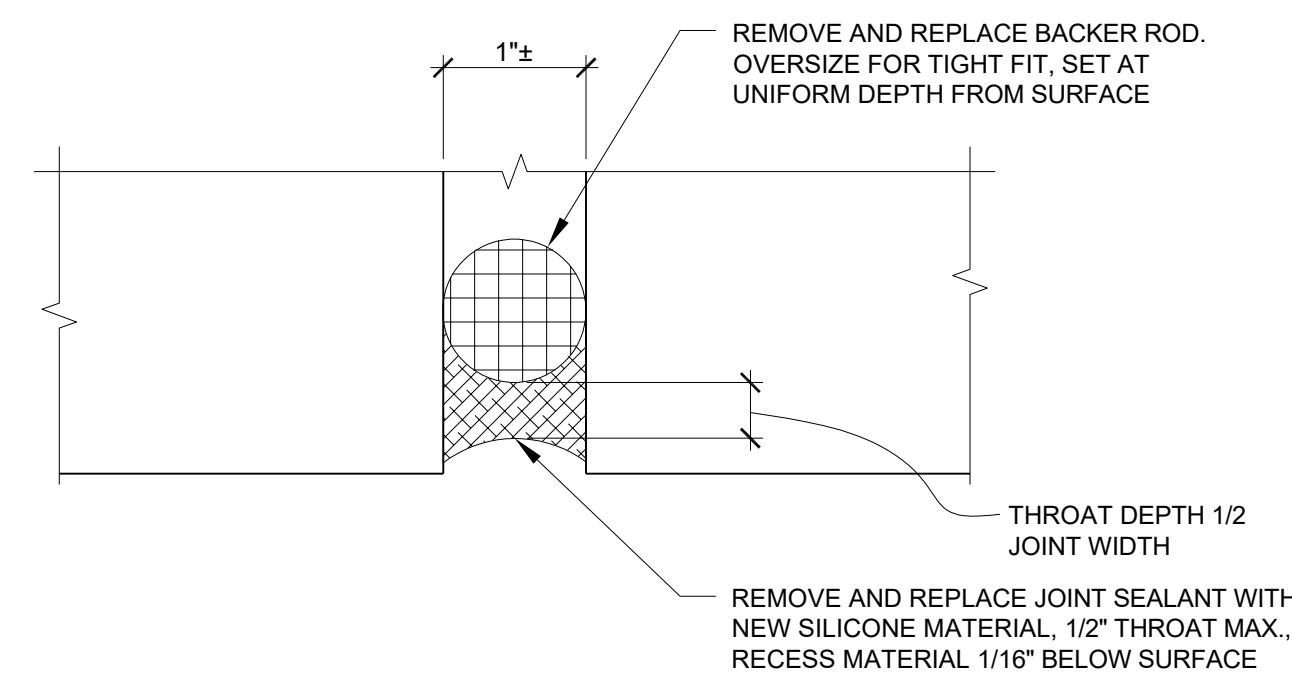


- NOTE:
- CONTRACTOR SHALL, WITH MANUFACTURER, VERIFY FIELD INSTALLATION WIDTH BASED ON TEMPERATURE CONDITIONS.
 - PROVIDE SHOP DRAWINGS SHOWING JOINT INTERSECTIONS AND WALL TERMINATIONS.

10.3 EXPANSION JOINT-ELASTOMERIC CONCRETE EDGED

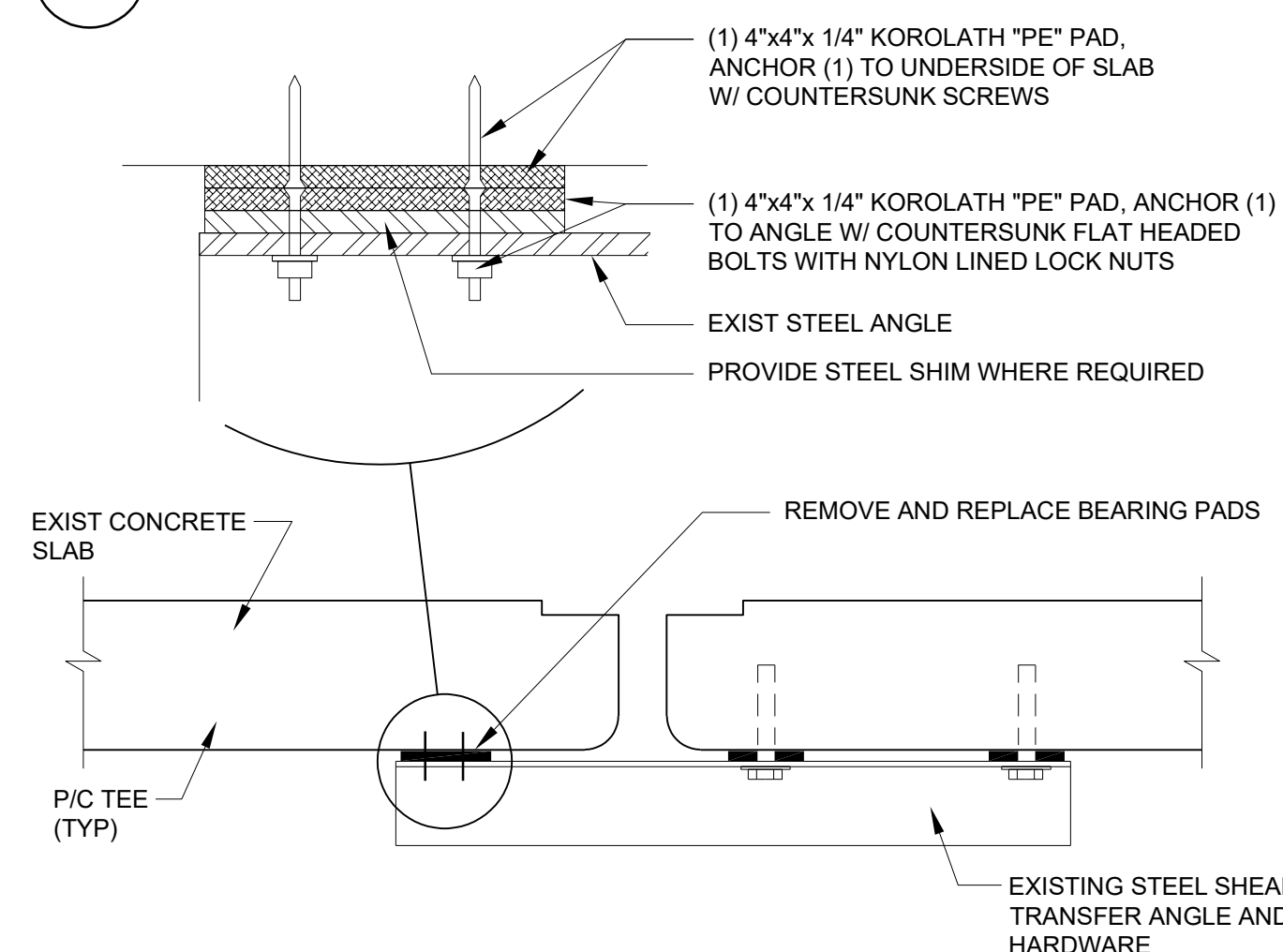


11.3B COLUMN TO WALL JOINT SEALANT (REFERENCE)



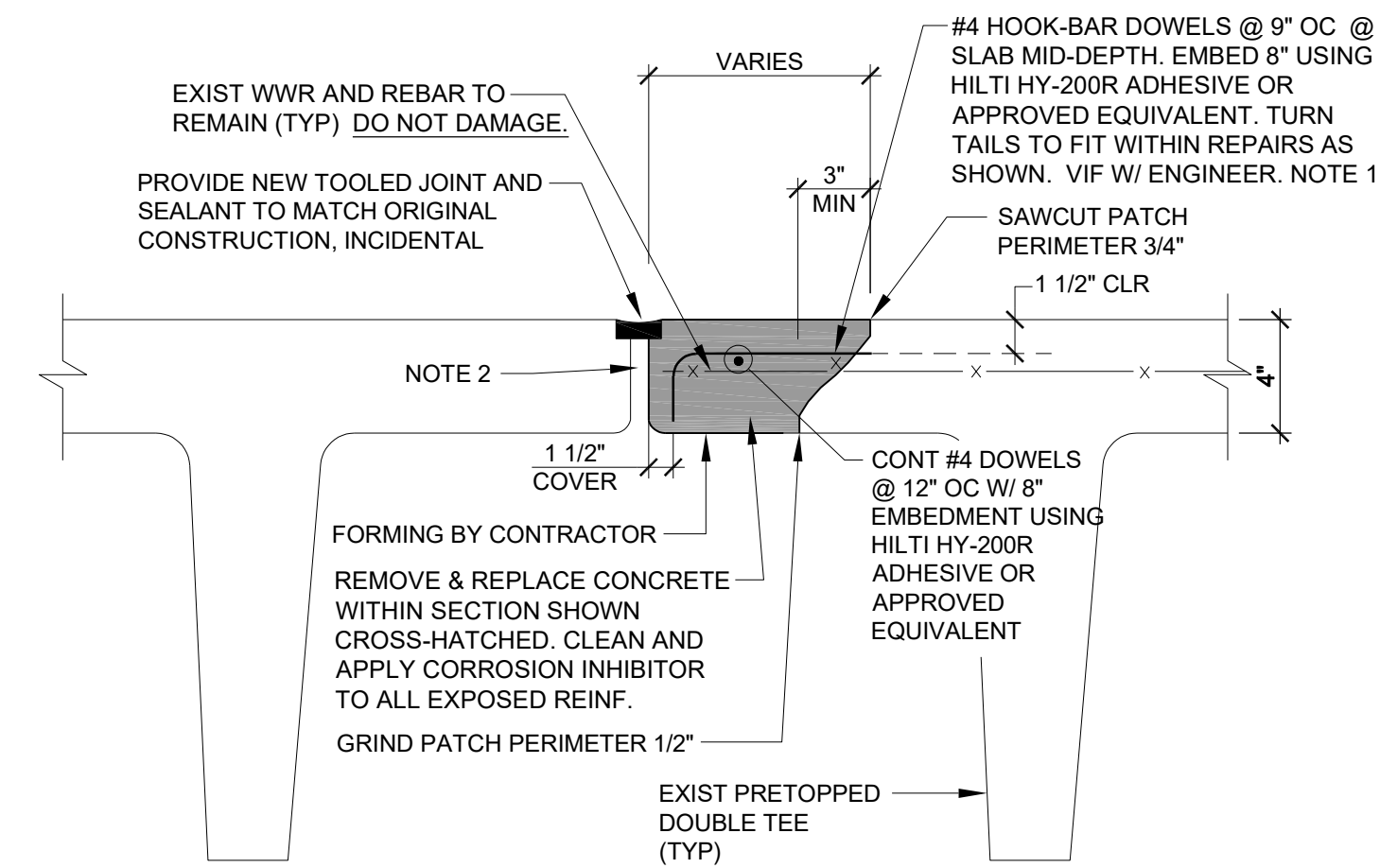
- NOTES:
- REMOVE EXISTING JOINT SEALANT AND BACKER MATERIAL.
 - PREPARE AND PRIME SEALANT CAVITY & INSTALL NEW SILICONE SEALANT ACCORDING TO SEALANT MANUFACTURER'S RECOMMENDATIONS.

11.3A WALL PANEL JOINT SEALANT



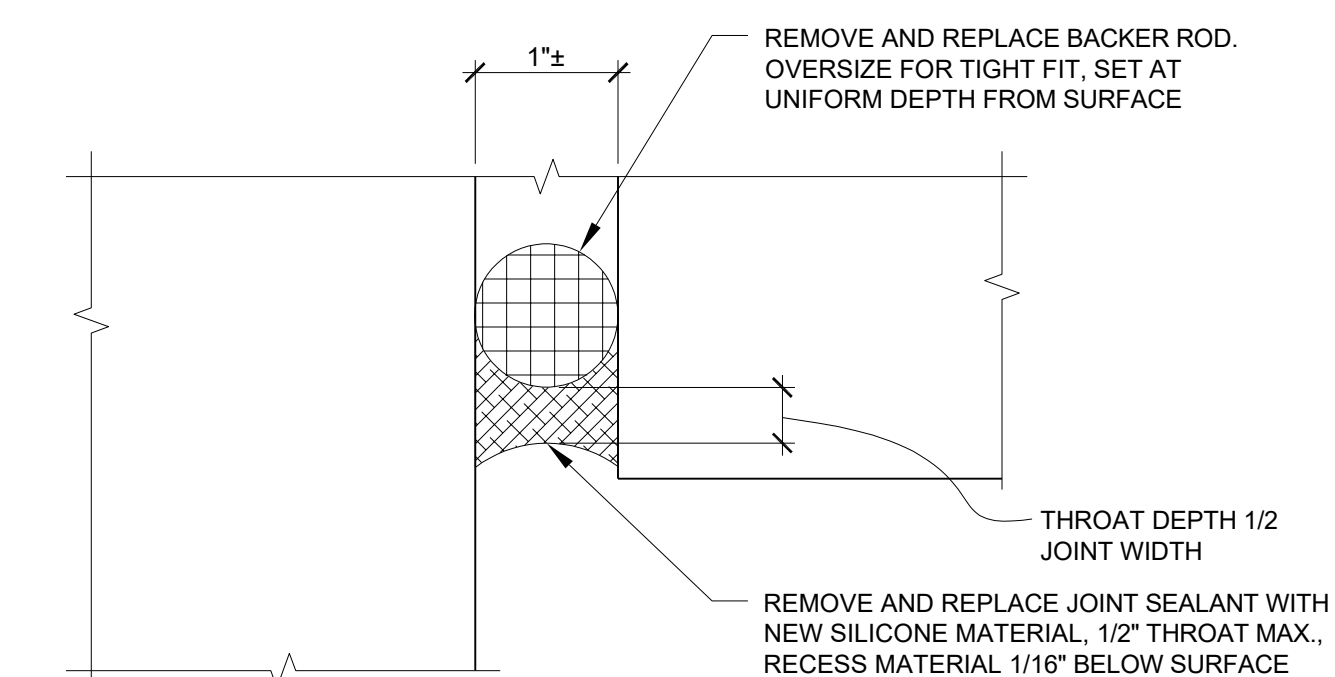
- NOTES:
- WORK ITEM INCLUDES REMOVAL AND REPLACEMENT OF MISSING OR MISALIGNED BEARING PADS AT SHEAR TRANSFER ANGLES WHERE INDICATED ON PLAN DRAWINGS. WORK INCLUDES REMOVAL AND REINSTALLATION OF EXISTING STEEL ANGLE AS REQUIRED, AND INSTALLATION OF (2) NEW BEARING PADS AND HARDWARE.
 - WHERE REQUIRED, PROVIDE GALVANIZED SHIMS AND TACK WELD.

10.8 SHEAR TRANSFER ANGLES - REPLACE PADS



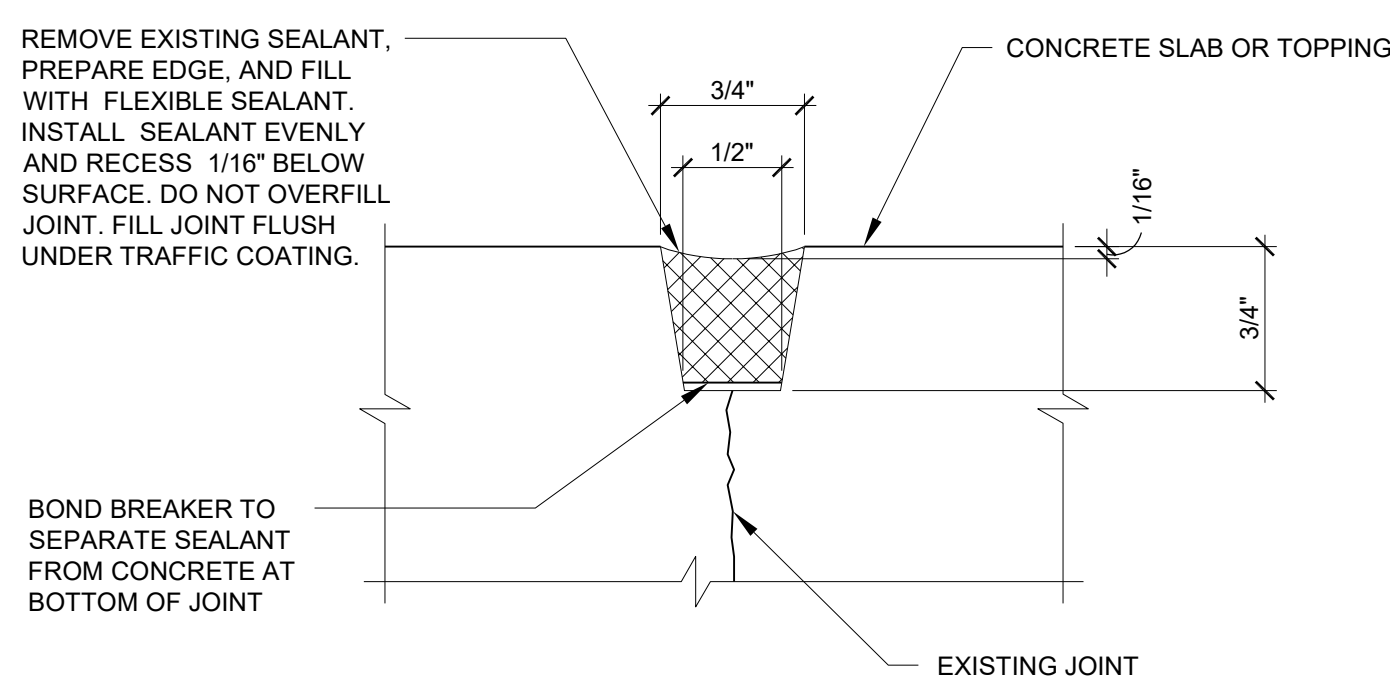
- NOTES:
- REMOVAL MAY BE ONE OR BOTH SIDES OF JOINT.
 - SHEAR CONNECTOR NOT SHOWN. DO NOT DAMAGE.
 - SHORING/FORMWORK BY CONTRACTOR IS INCIDENTAL TO THIS WORK.
 - PROVIDE MIN. 1 1/2" COVER OVER ALL REINFORCEMENT.
 - WHERE FULL-DEPTH SLAB REPAIRS EXTEND OVER TEE STEM, INSTALL #4 L-PINS 12"x8" (EMBED 6" WITH HILTI HY-200R ADHESIVE OR APPROVED EQUIVALENT.) L-PIN LEGS TO EXTEND INTO REPAIR ARE PERPENDICULAR TO THE TEE STEM, ALTERNATING DIRECTION @ 9" OC. (INCIDENTAL).

8.4 TEE FLANGE REPAIR - FULL DEPTH

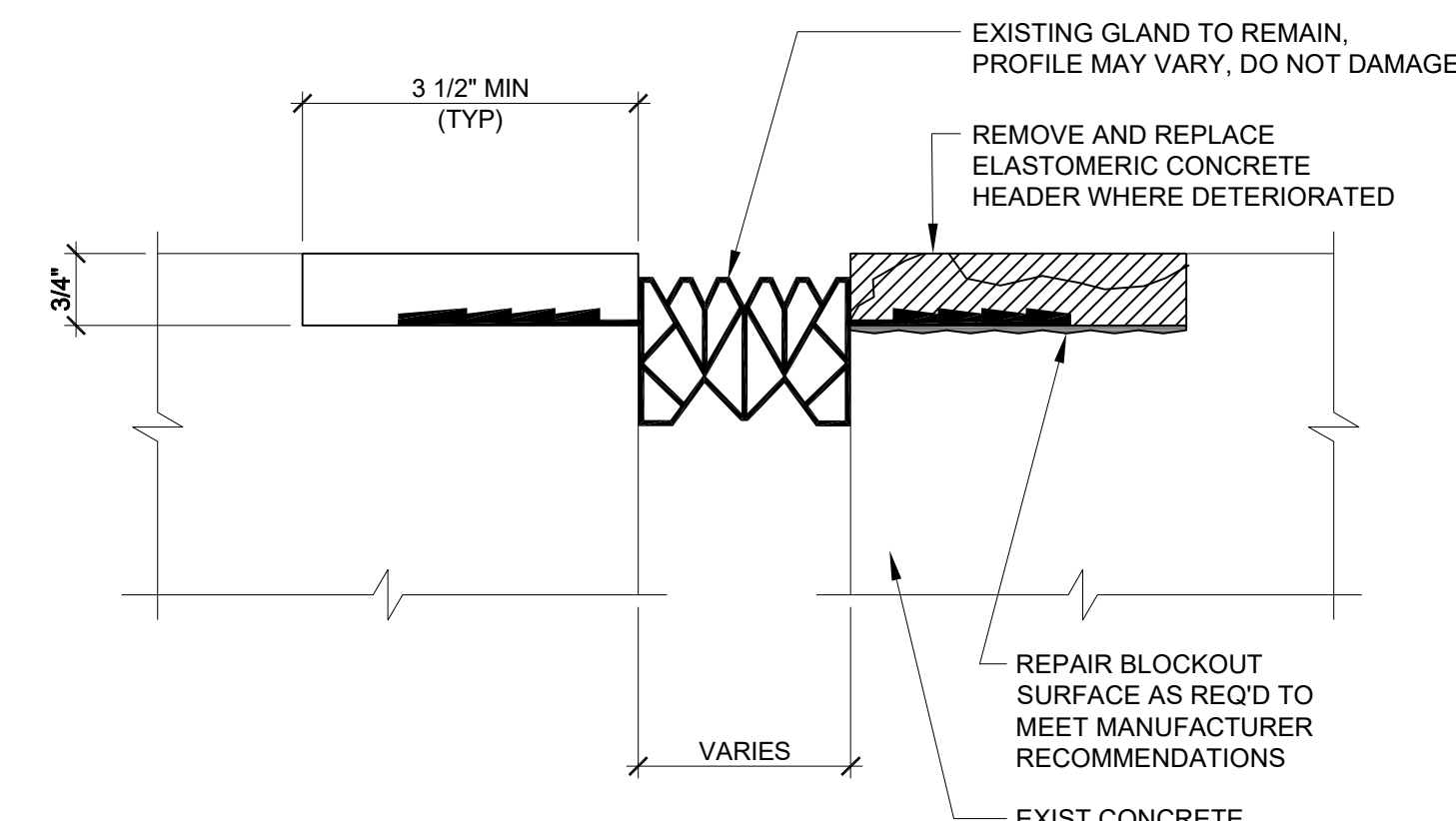


- NOTES:
- REMOVE EXISTING JOINT SEALANT AND BACKER MATERIAL.
 - PREPARE AND PRIME SEALANT CAVITY & INSTALL NEW SILICONE SEALANT ACCORDING TO SEALANT MANUFACTURER'S RECOMMENDATIONS.

11.3B COLUMN TO WALL JOINT SEALANT

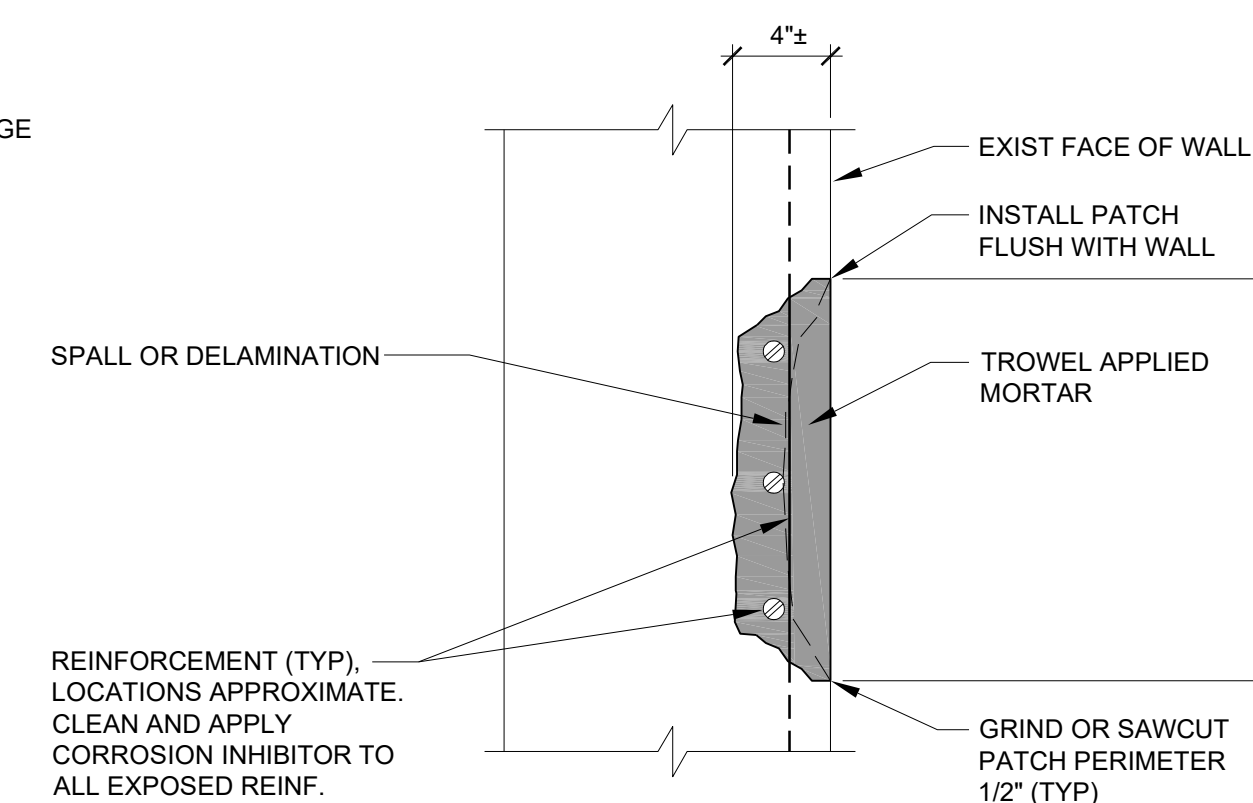


11.2 REPAIR JOINT SEALANTS



- NOTE:
- PERFORM IN MANNER TO NOT DAMAGE EXISTING EXPANSION JOINT GLAND OR WINGS.

10.3.1 EXPANSION JOINT - ELASTOMERIC NOSING REPAIR



- NOTES:
- WHERE REPAIR OCCURS WITHIN A PREVIOUSLY PAINTED AREA, CONTRACTOR SHALL PROVIDE NEW PAINTED FINISH TO MATCH ADJACENT AREAS, INCIDENTAL.

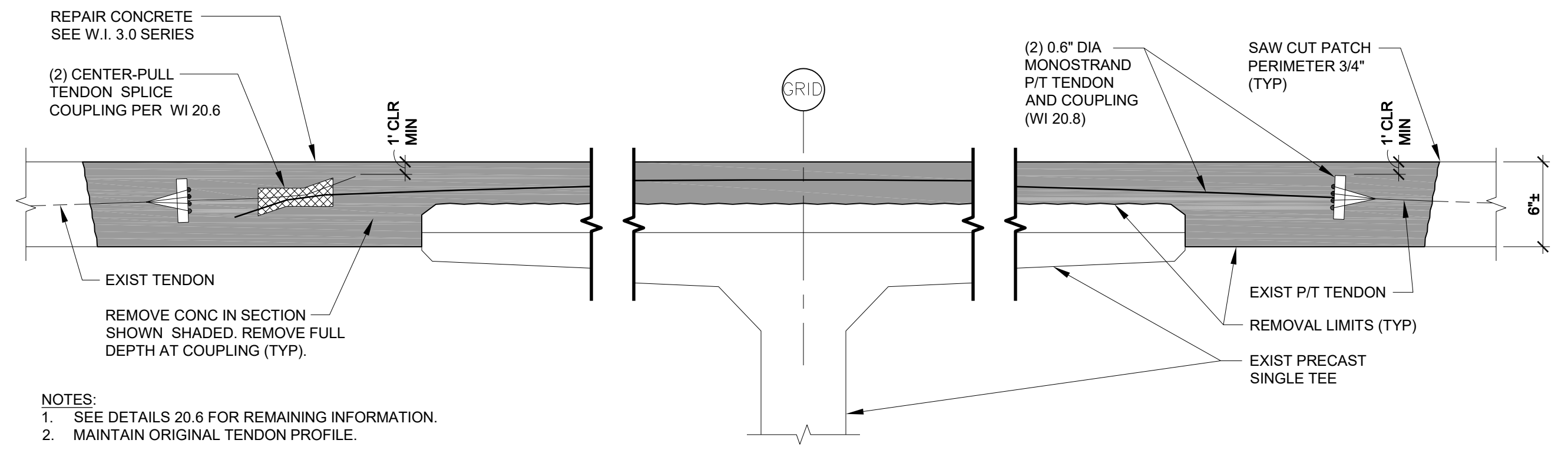
7.1 WALL REPAIR-PARTIAL DEPTH

CAPITAL PROJ. NO.
CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

REPAIR DETAILS

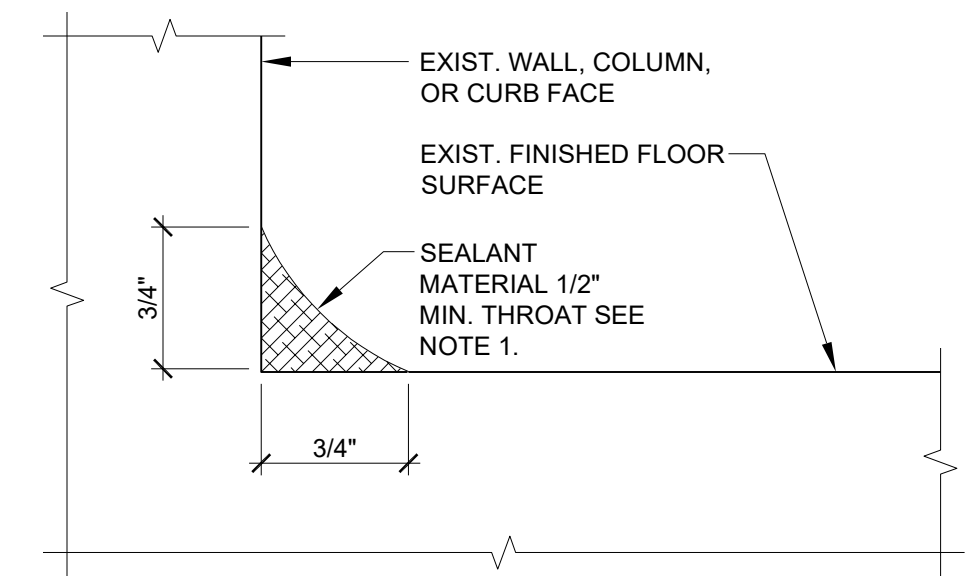
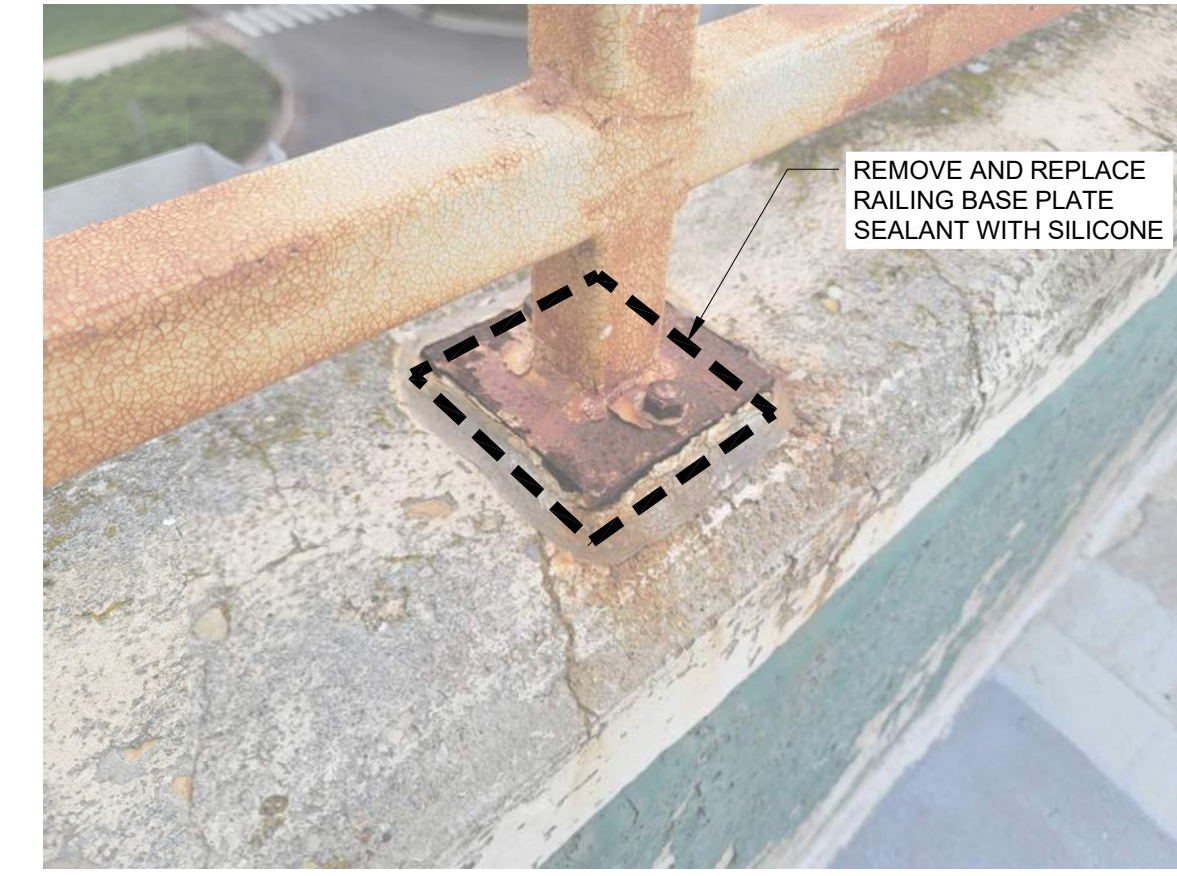
R-502



NOTES:
 1. SEE DETAILS 20.6 FOR REMAINING INFORMATION.
 2. MAINTAIN ORIGINAL TENDON PROFILE.

TENDON SPLICE COUPLING OVER BEAM

20.6.1



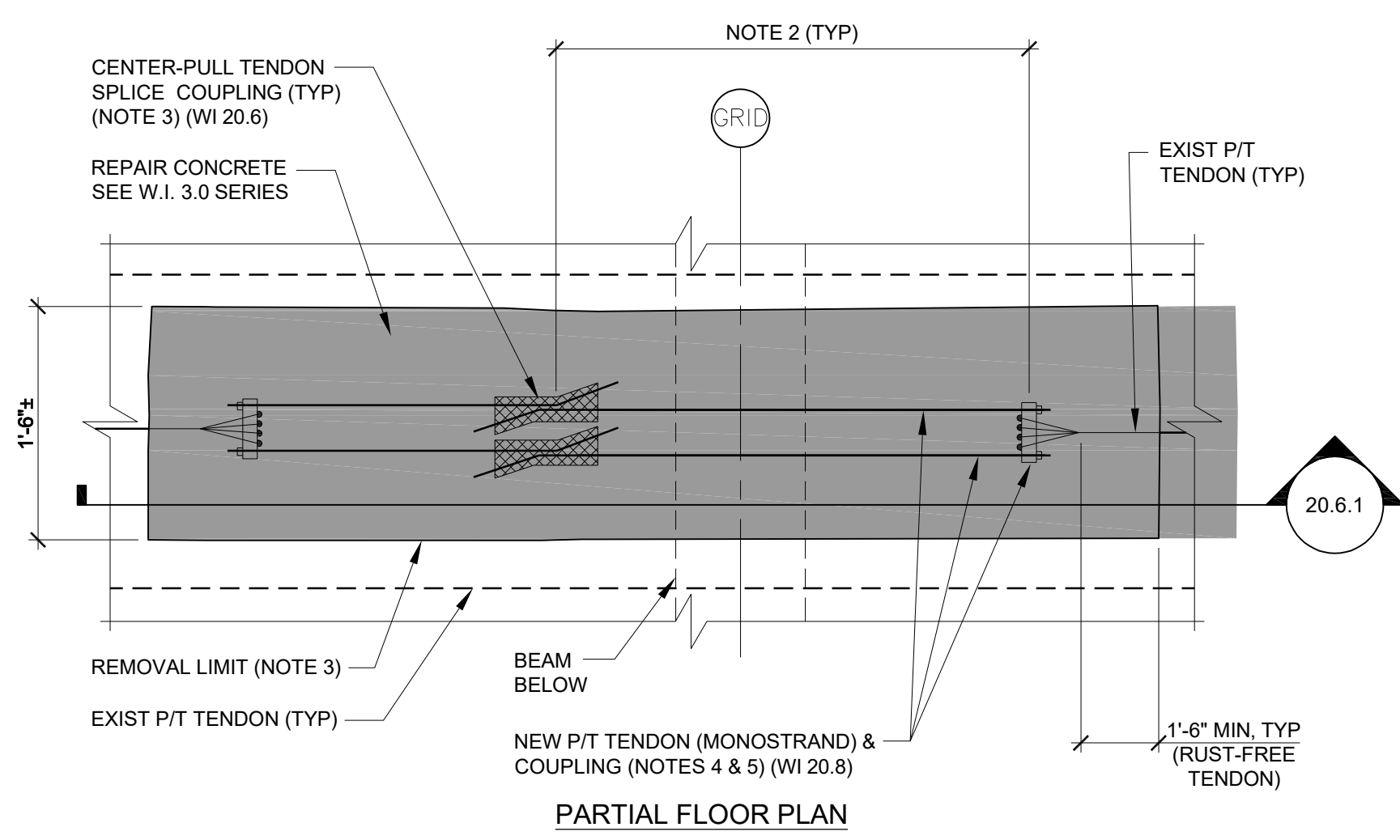
NOTE:
 1. REMOVE EXISTING COVE SEALANT MATERIAL IF PRESENT. PREPARE SURFACE PER SPECIFICATIONS.

RAIL PLATE SEALANT

11.7B

COVE SEALANT

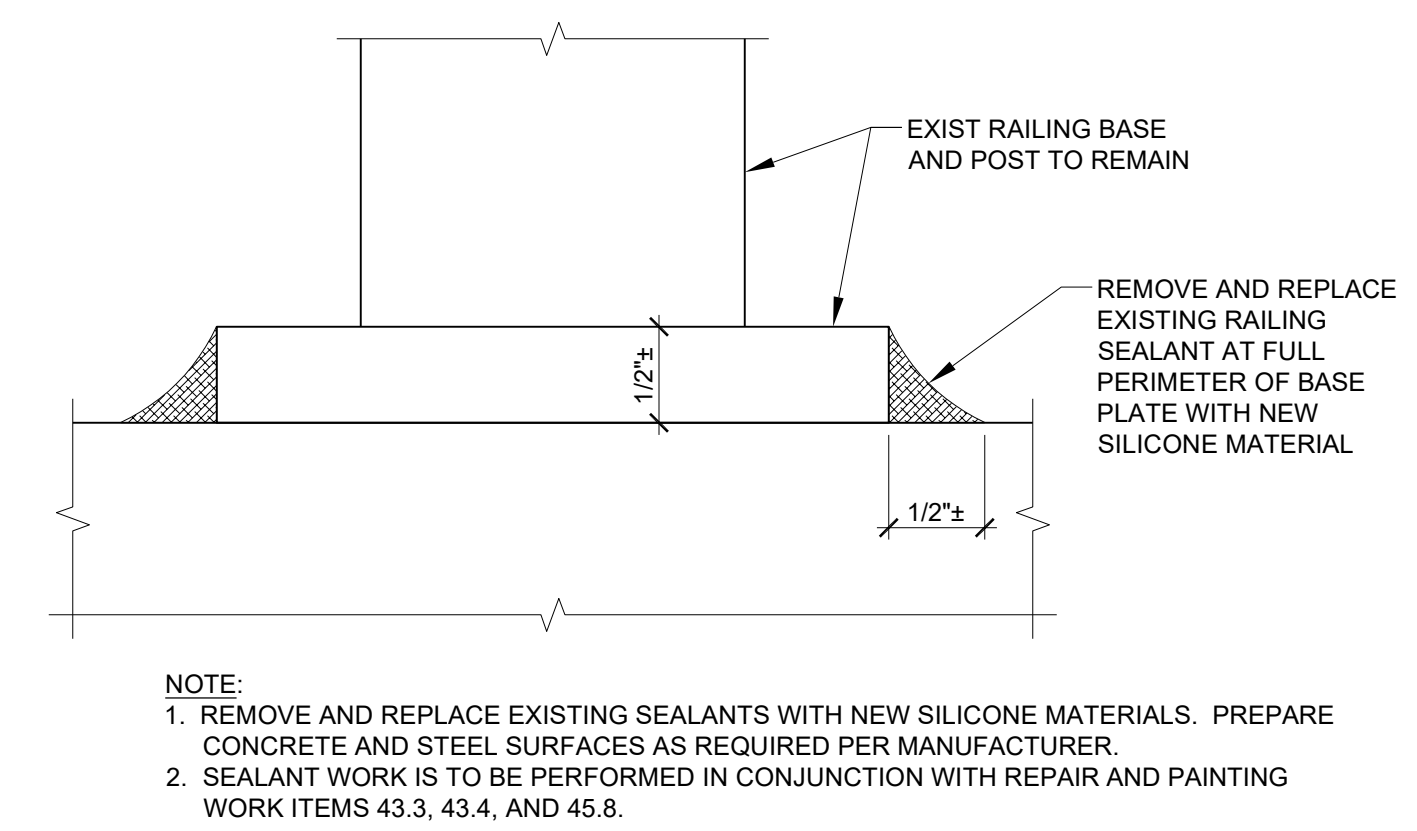
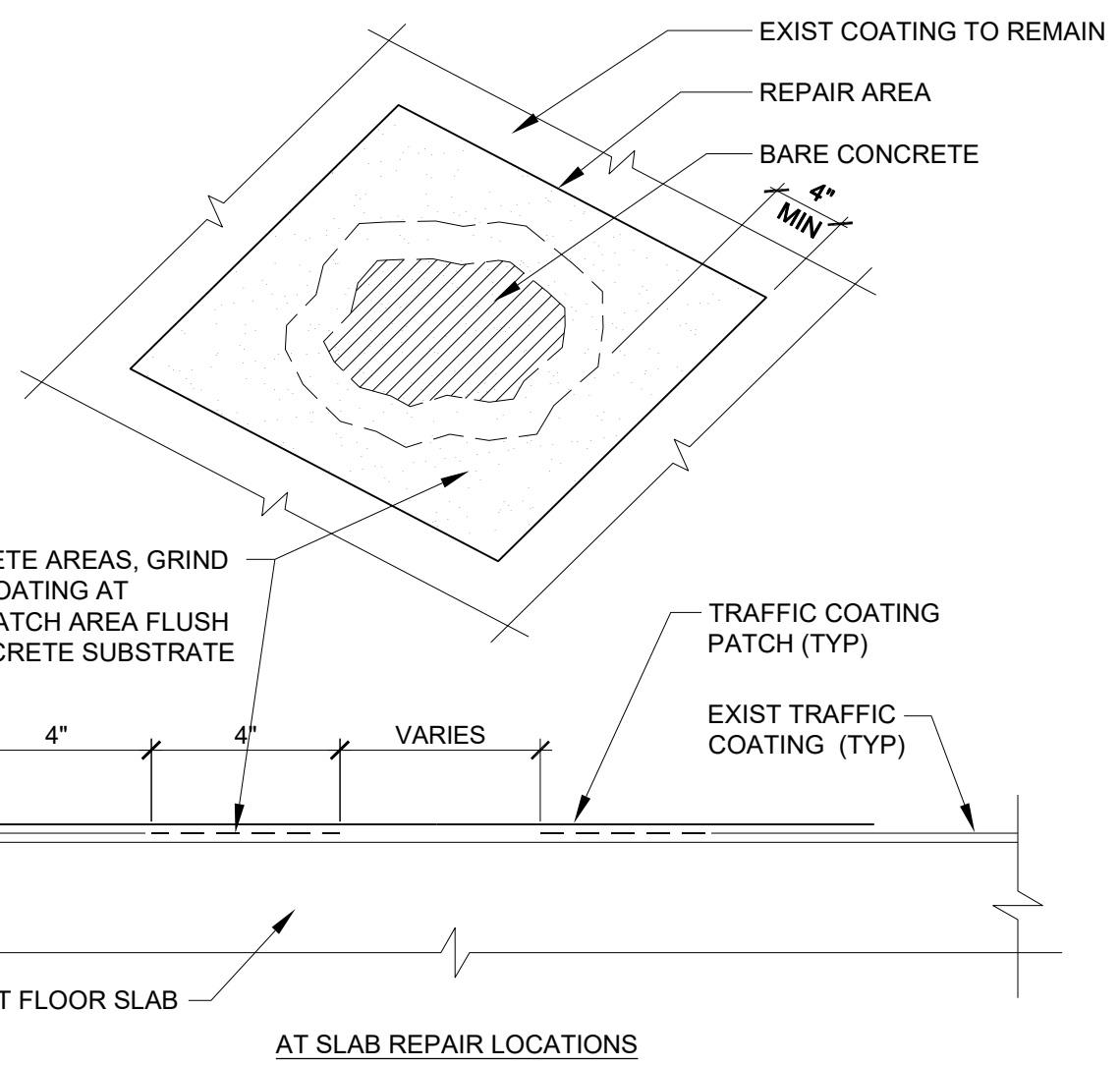
11.7



NOTES:
 1. SEE DETAILS SERIES 20.6 FOR ADDITIONAL INFORMATION.
 2. LOCATE COUPLINGS AS REQ'D BY STRESSING AND INSTALLATION METHODS, AND TO MINIMIZE CONCRETE REMOVALS.
 3. STAGGER AND SPACE SPLICE COUPLINGS AS REQ'D TO FACILITATE STRESSING OPERATIONS.
 4. LOCATE SPLICE COUPLINGS ALONG EXIST. TENDON PROFILE AT SLAB MID-DEPTH. CONTINUE WITH CONCRETE REMOVALS BEYOND THIS POINT IF TENDONS ARE NOT RUST-FREE ONLY AS DIRECTED BY THE ENGINEER.
 5. NEW TENDON LENGTH BEYOND 10'-0" SHALL BE PAID FOR UNDER W.I. 20.9.
 6. FOR W.I. 20.6, CONTRACTOR SHALL BE PAID FOR EACH TENDON REQ'D PER UNIT 'EACH' (INCLUDES (2) CENTER-PULL COUPLINGS AS SHOWN ABOVE).

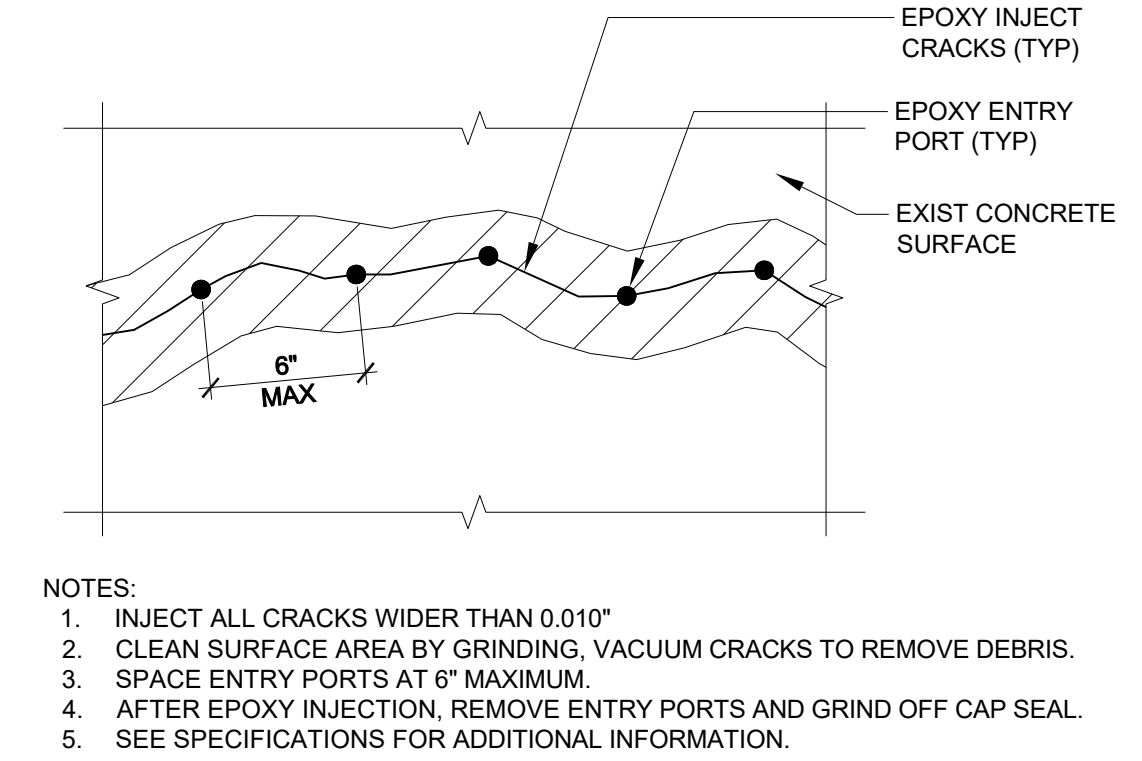
**TENDON SPLICE COUPLING (CENTER PULL)
 TENDON SPLICE COUPLING (DOUBLE)**

20.6 20.8



RAIL PLATE SEALANT

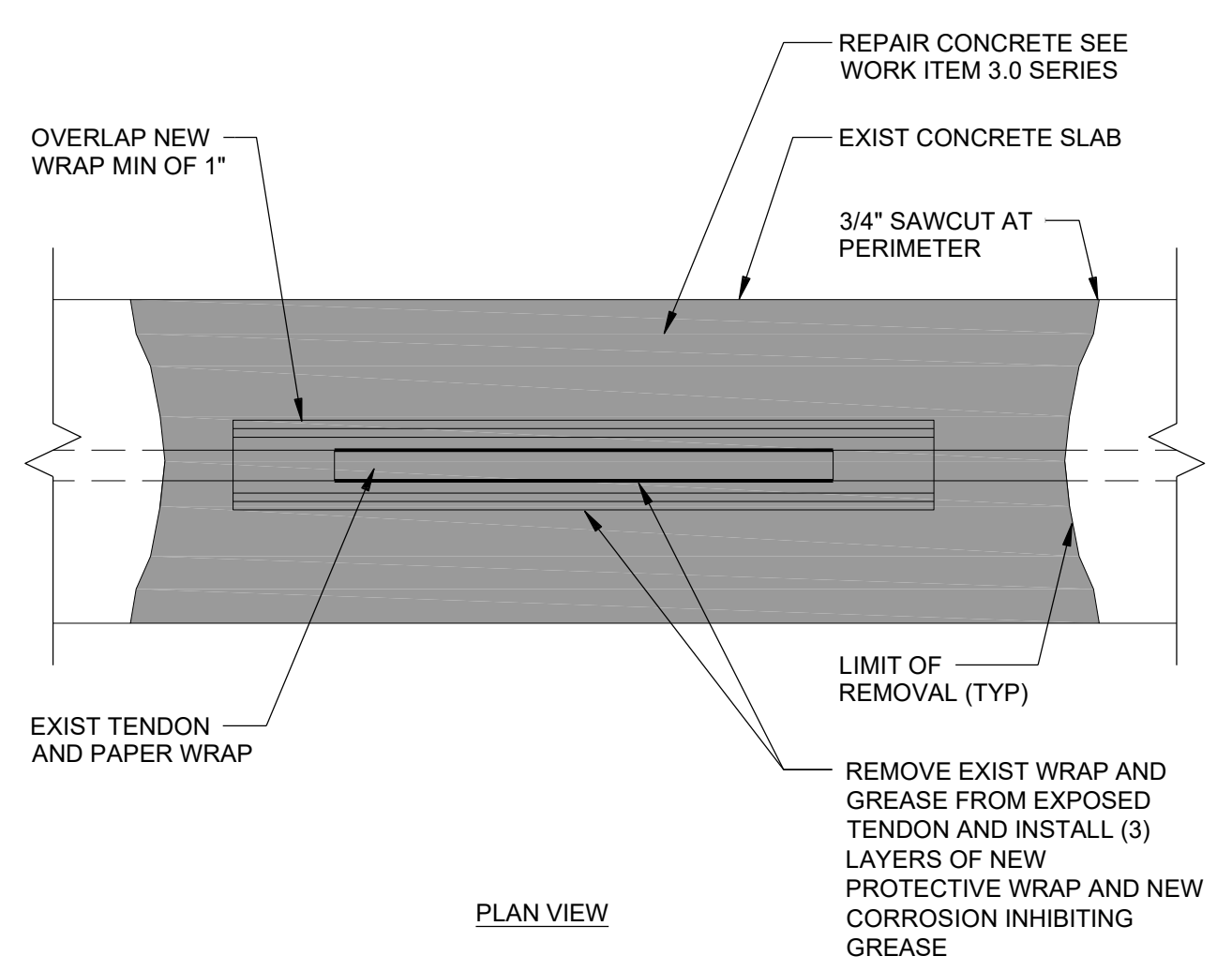
11.7B



NOTES:
 1. INJECT ALL CRACKS WIDER THAN 0.010"
 2. CLEAN SURFACE AREA BY GRINDING. VACUUM CRACKS TO REMOVE DEBRIS.
 3. SPACE ENTRY PORTS AT 6" MAXIMUM.
 4. AFTER EPOXY INJECTION, REMOVE ENTRY PORTS AND GRIND OFF CAP SEAL.
 5. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

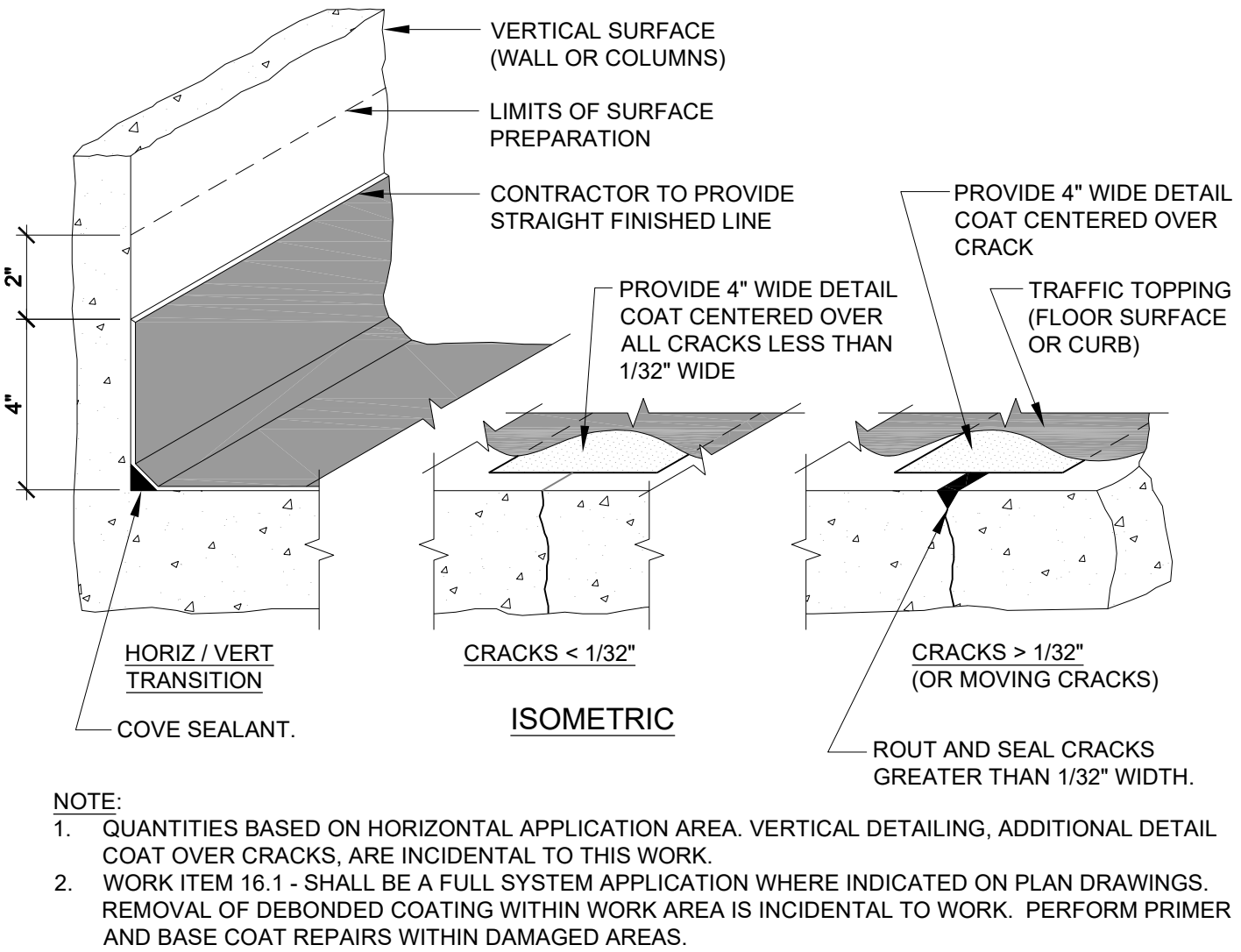
EPOXY INJECTION

11.5



PROTECT EXPOSED P/T TENDONS

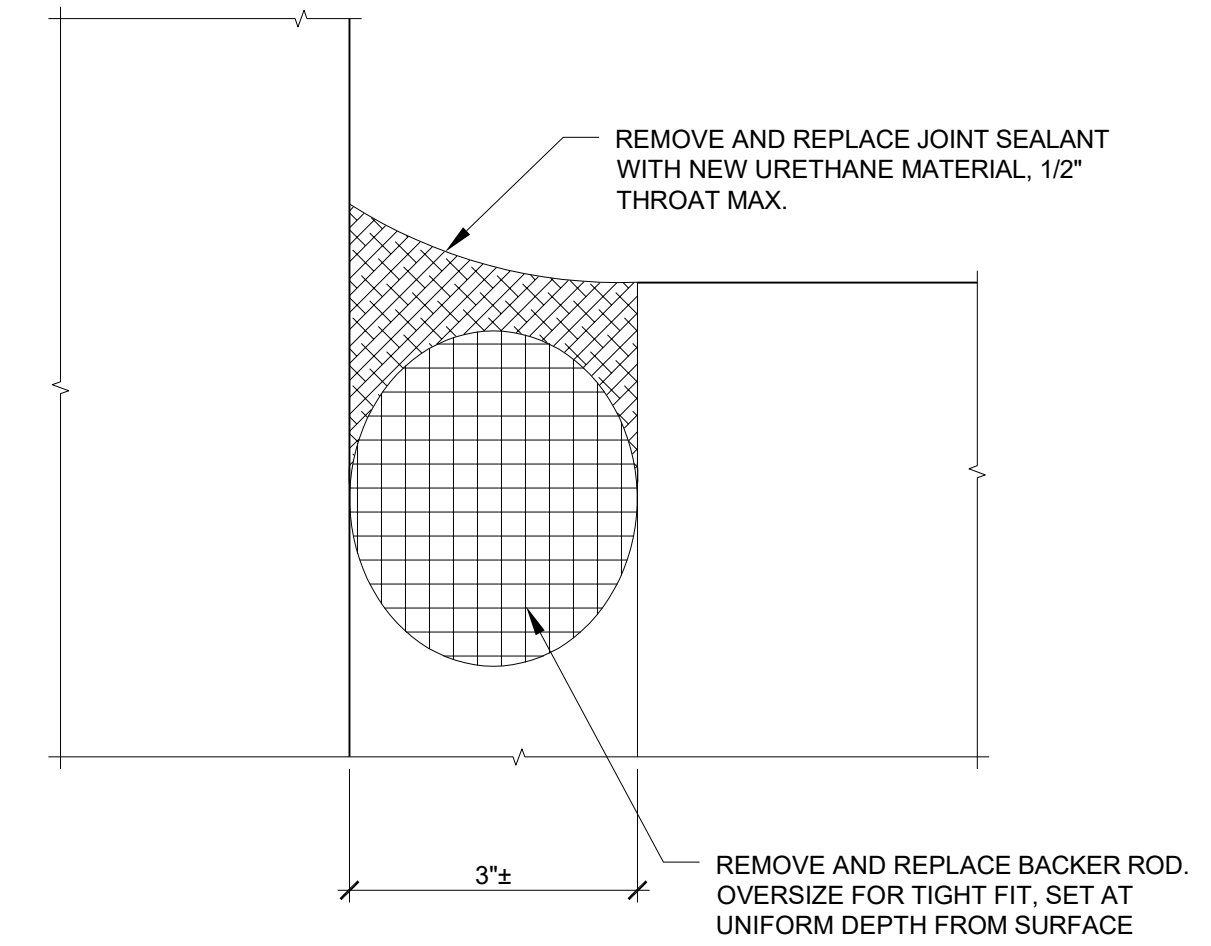
20.2



NOTE:
 1. QUANTITIES BASED ON HORIZONTAL APPLICATION AREA. VERTICAL DETAILING, ADDITIONAL DETAIL COAT OVER CRACKS, ARE INCIDENTAL TO THIS WORK.
 2. WORK ITEM 16.1 - SHALL BE A FULL SYSTEM APPLICATION WHERE INDICATED ON PLAN DRAWINGS. REMOVAL OF DEBONDED COATING WITHIN WORK AREA IS INCIDENTAL TO WORK. PERFORM PRIMER AND BASE COAT REPAIRS WITHIN DAMAGED AREAS.

TRAFFIC TOPPING - VEHICULAR

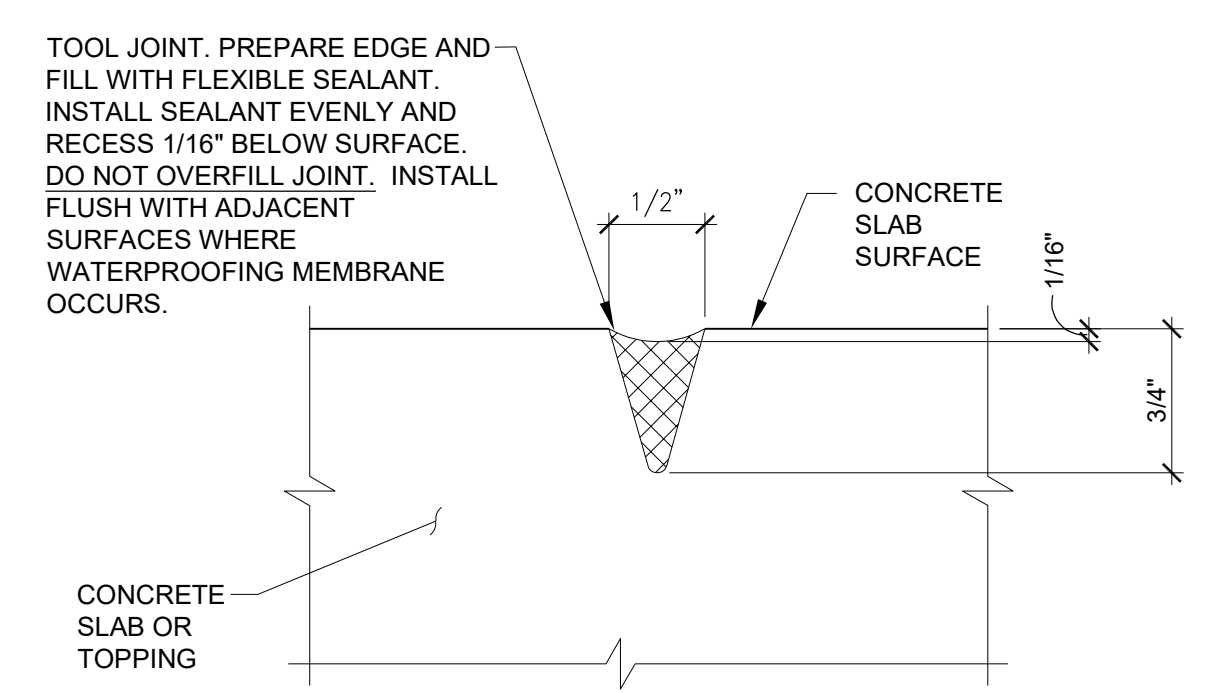
16.1



NOTE:
 1. REMOVE EXISTING COVE SEALANT MATERIAL IF PRESENT. PREPARE SURFACE PER SPECIFICATIONS.

COVE SEALANT REPLACEMENT - WIDE

11.7A



NOTES:
 1. MATCH EXISTING JOINTS LAYOUT. TOOLING AND SEALING CONTROL JOINTS IS INCIDENTAL TO ALL CONCRETE REPAIR WORK, AND IS NOT A SEPARATE PAY ITEM.
 2. CONTROL JOINT (C.J.) MUST BE TOOLED IN PLASTIC CONCRETE AND DIMENSIONS AS DETAILED WILL BE MAINTAINED IN SET CONCRETE. SAWCUTTING OF CONTROL JOINT IN HARDENED CONCRETE WILL NOT BE PERMITTED.

**TOOL AND SEAL CONTROL JOINTS
 INCIDENTAL TO CONCRETE WORK**

11.4

CAPITAL PROJ. NO.
 CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

REPAIR DETAILS

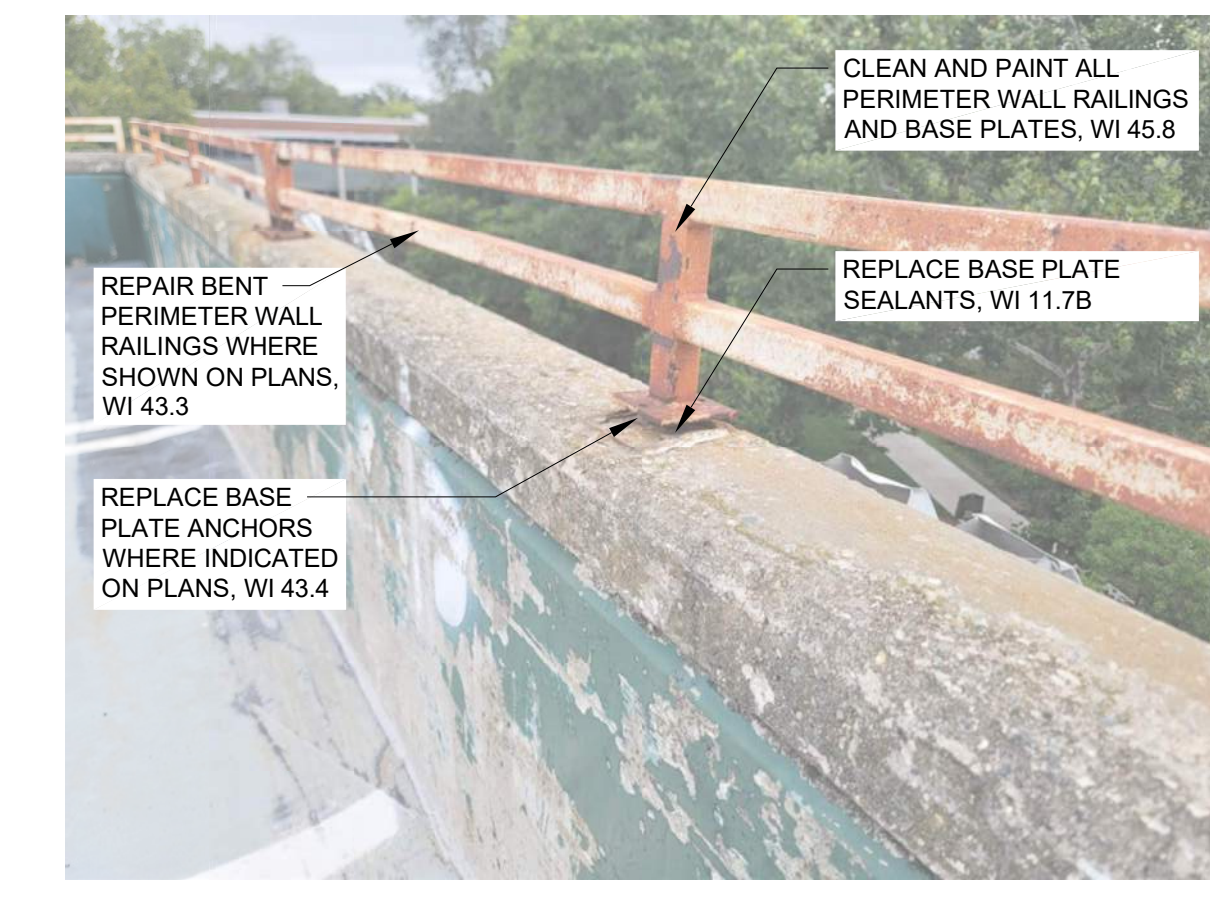
R-503

CAPITAL PROJ. NO.
CP23098

LEAD	AL
ARCH.	N/A
MECH.	N/A
ELEC.	N/A
CIVIL	SML
L.A.	N/A
REP.	AL
APPR.	MSG
DATE	03/11/2024
SCALE	AS SHOWN
REVISIONS	

REPAIR DETAILS

R-504
20 OF 20

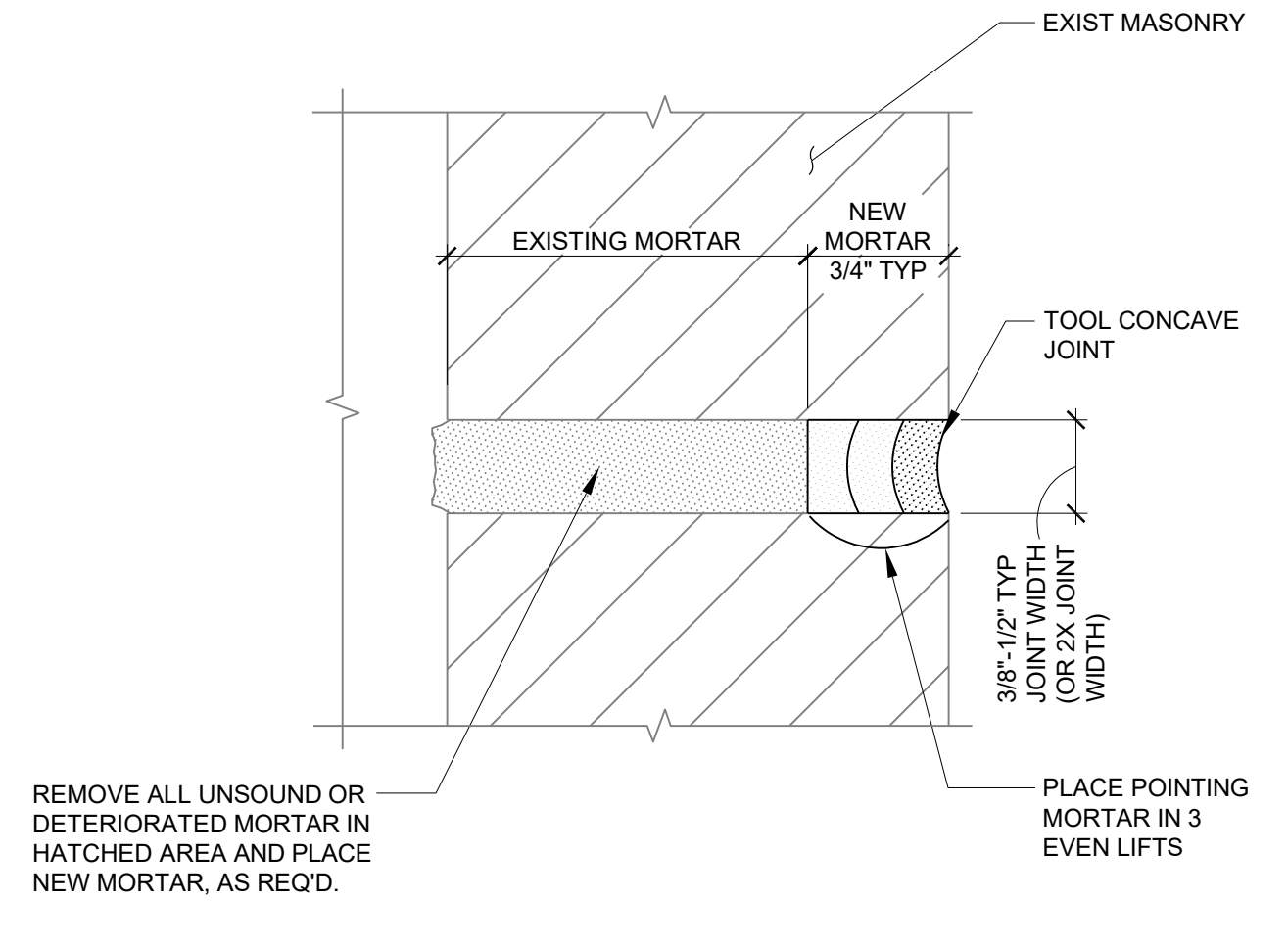


- NOTES:
1. WORK ITEM 43.3 REPAIR RAILING: INCLUDES ALL INCIDENTALS NECESSARY TO REPAIR EXISTING BENT STEEL RAILINGS TO MATCH THE ADJACENT UNIFORM RAILINGS, WHERE NOTED ON PLANS.
 2. WORK ITEM 43.4 REPLACE RAILING ANCHORS: INCLUDES ALL INCIDENTALS NECESSARY TO REMOVE AND REPLACE EXISTING RAILING BASE PLATE ANCHORS. NEW ANCHORS SHALL BE GALVANIZED HILTI KWIK BOLT OR ENGINEER APPROVED EQUAL.
 3. WORK ITEM 45.8 PAINT RAILINGS: INCLUDES ALL INCIDENTALS NECESSARY TO CLEAN AND PAINT ALL EXPOSED SURFACES OF PERIMETER WALL RAILINGS AND BASE PLATES WHERE INDICATED ON THE PLAN DRAWINGS. ALL STEEL SHALL BE CLEANED AND PREPARED AND PAINTED PER SPECIFICATION SECTION 099113 - EXTERIOR PAINTING. PROVIDE COLOR TABLE TO OWNER FOR FINAL COLOR SELECTION.



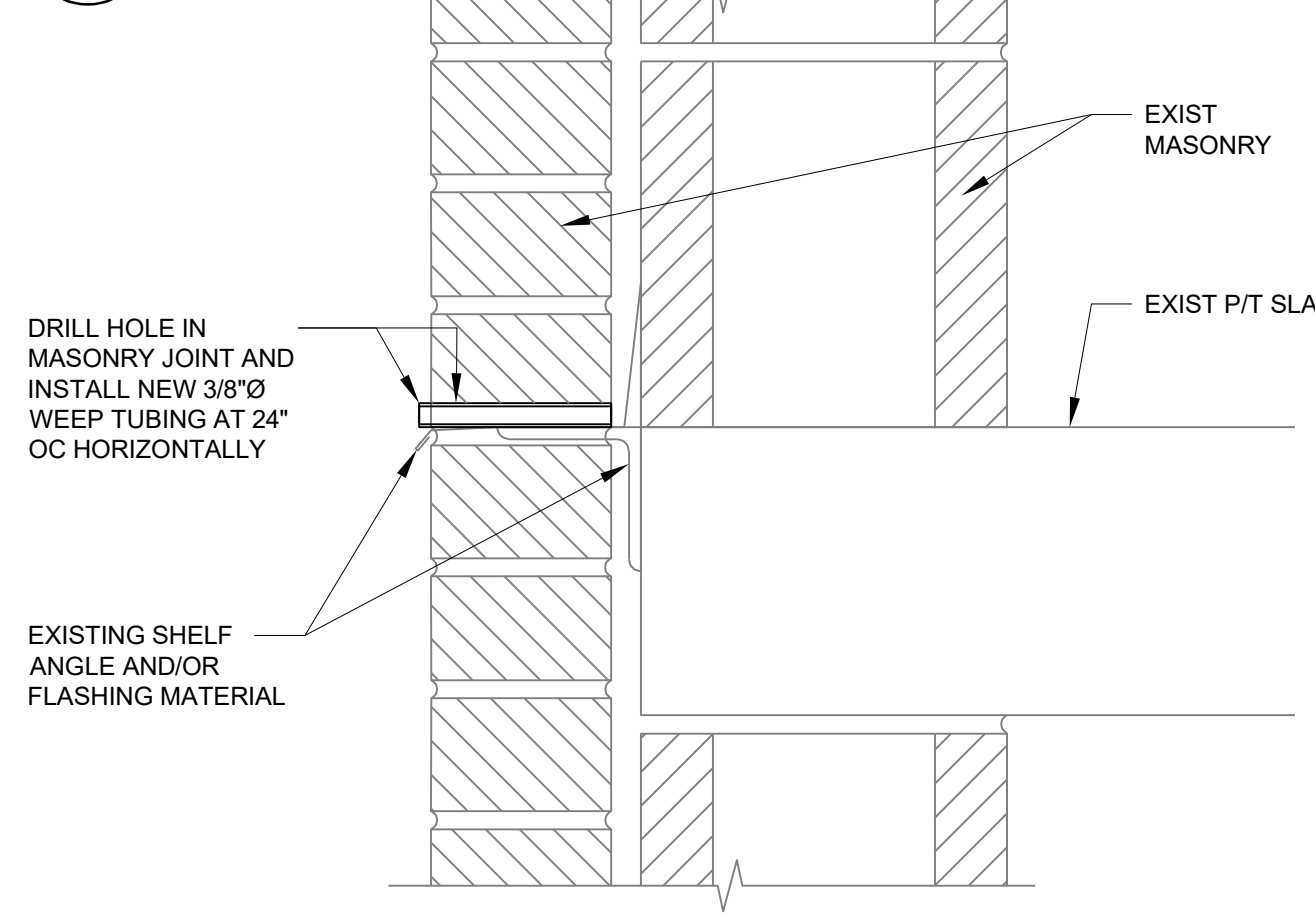
- NOTES:
1. WORK ITEM 45.2A: INCLUDES ALL INCIDENTALS NECESSARY TO CLEAN AND PREPARE EXISTING CONCRETE COLUMN SURFACES AND APPLY NEW BLACK AND YELLOW PAINT MATERIAL TO MATCH THE EXISTING CAUTION STRIPING.
 2. REFER TO SPECIFICATION SECTION "EXTERIOR PAINTING" FOR ADDITIONAL INFORMATION.

45.2A PAINT ROOF COLUMN CAUTION STRIPE
(REFERENCE)



- REMOVE ALL UNSOUND OR DETERIORATED MORTAR IN HATCHED AREA AND PLACE NEW MORTAR, AS REQ'D.
- NOTES:
1. REMOVE LOOSE MORTAR MATERIAL FROM JOINT.
 2. FILL AND VOIDS IN JOINT BEYOND POINTING WORK DEPTH.
 3. GRIND BRICK SURFACES CLEAN OF EXISTING MORTAR. DO NOT DAMAGE ADJACENT MASONRY.
 4. INSTALL MORTAR IN THREE LIFTS, COMPACTING EACH LIFT.
 5. TOOL MORTAR JOINT CONCAVE.

76.3 TUCKPOINTING



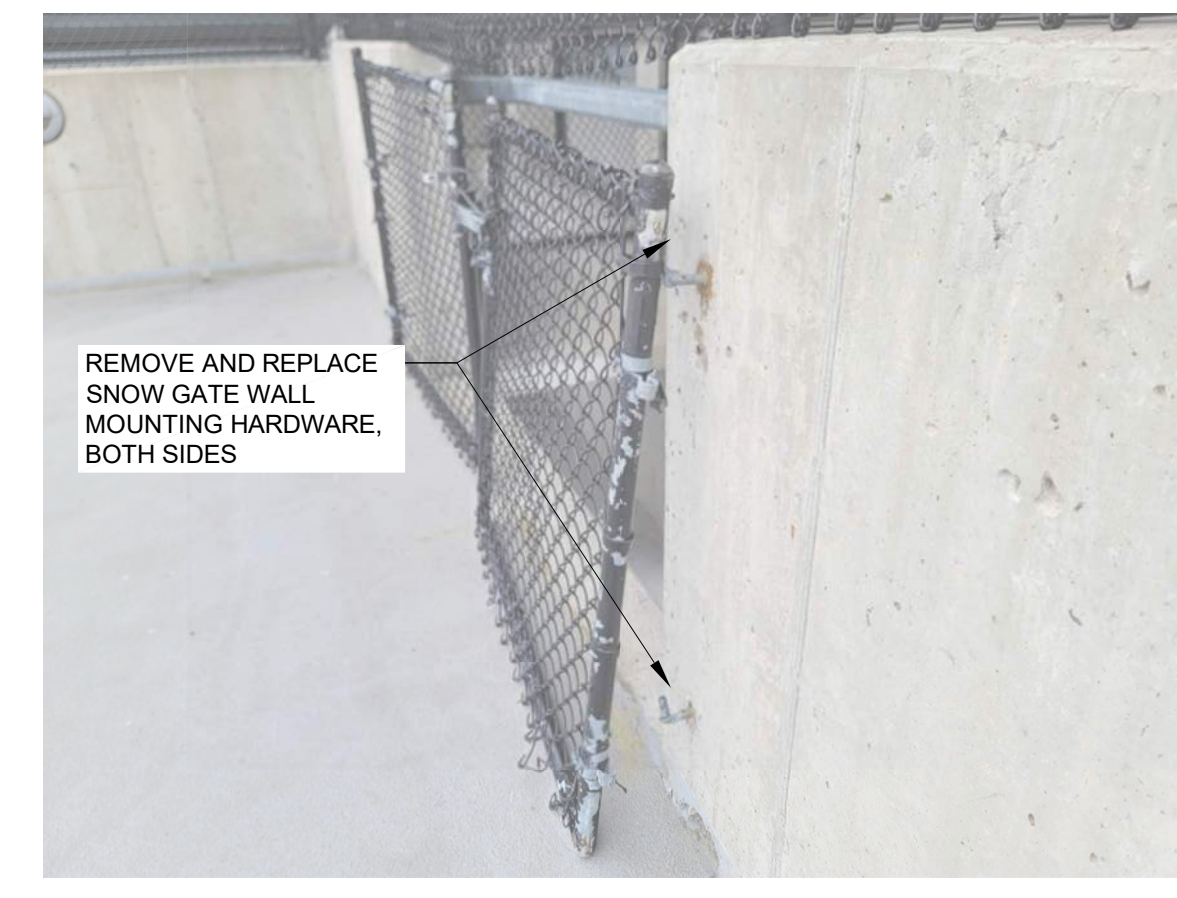
- NOTES:
1. FROM THE EXTERIOR OF THE STRUCTURE, THE CONTRACTOR SHALL IDENTIFY LOCATIONS OF EXISTING SHELF ANGLE SUPPORTS FOR THE BRICK FACADE, WHERE INDICATED ON THE PLAN DRAWINGS.
 2. CONTRACTOR SHALL DRILL THROUGH VERTICAL MASONRY JOINTS DIRECTLY ABOVE SHELF ANGLES (OR FLASHING) AND INSTALL NEW 3/8" CLEAR POLYETHYLENE TUBING. NEW TUBING SHALL BE APPROXIMATELY 4" IN LENGTH AND PROTRUDE NO MORE THAN 1/4" BEYOND THE FACE OF THE EXISTING MASONRY FINISH.
 3. INSTALL WEEPS AT 24" OC HORIZONTALLY ALONG ENTIRE FACE OF WALL, WHERE INDICATED ON THE PLAN DRAWINGS.

73.4 INSTALL NEW WEEP HOLES



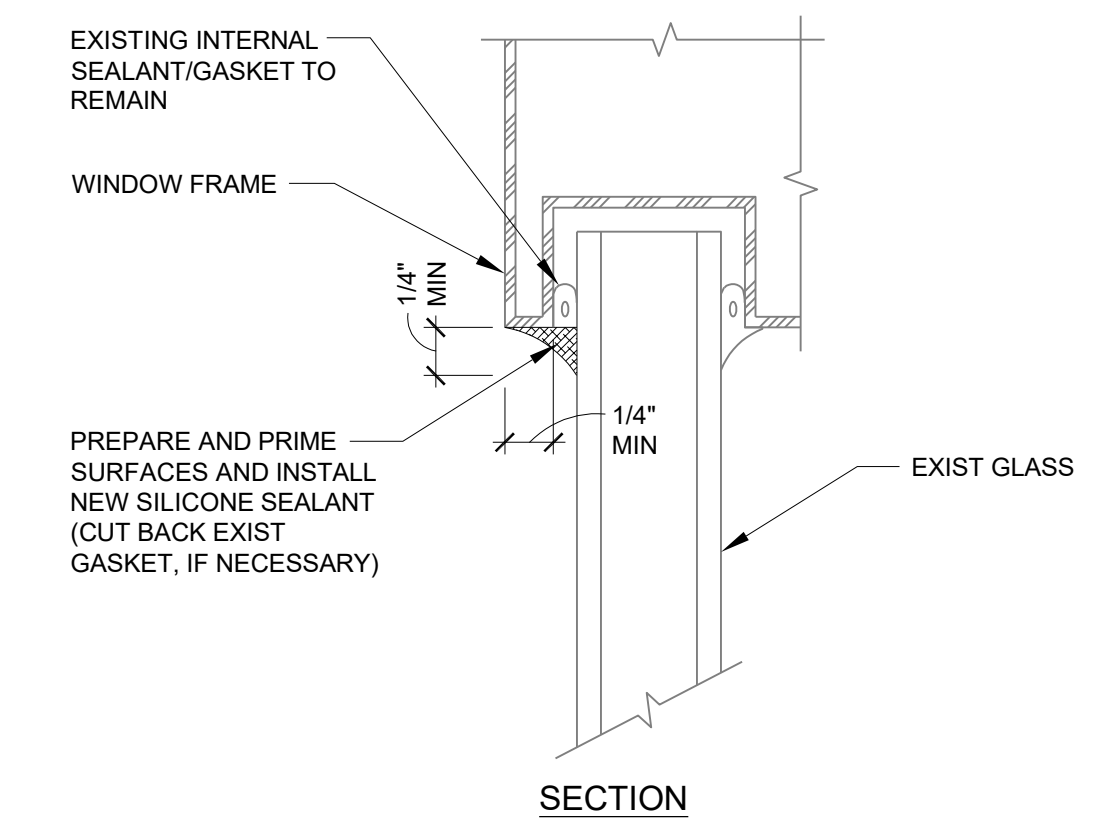
- NOTES:
1. WORK ITEM 73.1: INCLUDES ALL INCIDENTALS NECESSARY TO REMOVE, IF NEEDED, AND REPLACE EXISTING WALL FLASHING MATERIAL TO MATCH EXISTING. NEW FLASHING MATERIAL SHALL MATCH EXISTING BEND PROFILE, TERMINATIONS, MATERIAL, FINISH, AND SEALANTS. NEW ANCHORS SHALL BE CORROSION RESISTANT.

73.1 METAL FLASHING REPAIR
(REFERENCE)



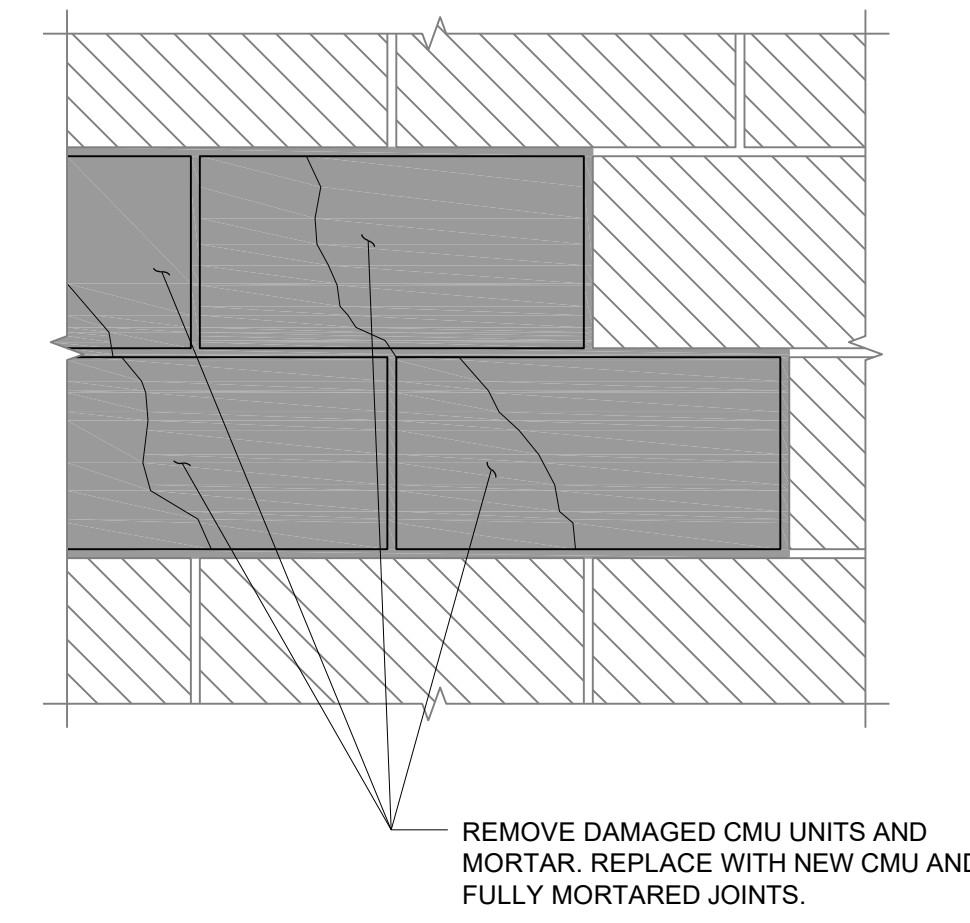
- NOTES:
1. WORK ITEM 43.5 GATE REPAIR: INCLUDES ALL INCIDENTALS NECESSARY TO REMOVE AND REPLACE EXISTING SNOW GATE WALL MOUNTING HARDWARE WITH NEW HEAVY DUTY MOUNTS ALLOWING THE GATE TO FUNCTION. REPLACEMENT APPLIES TO BOTH SIDES OF GATE. CONTRACTOR TO PROVIDE HARDWARE RECOMMENDATIONS AND MATERIAL SUBMITTALS FOR REVIEW BY ENGINEER.

43.5 GATE REPAIR
(REFERENCE)



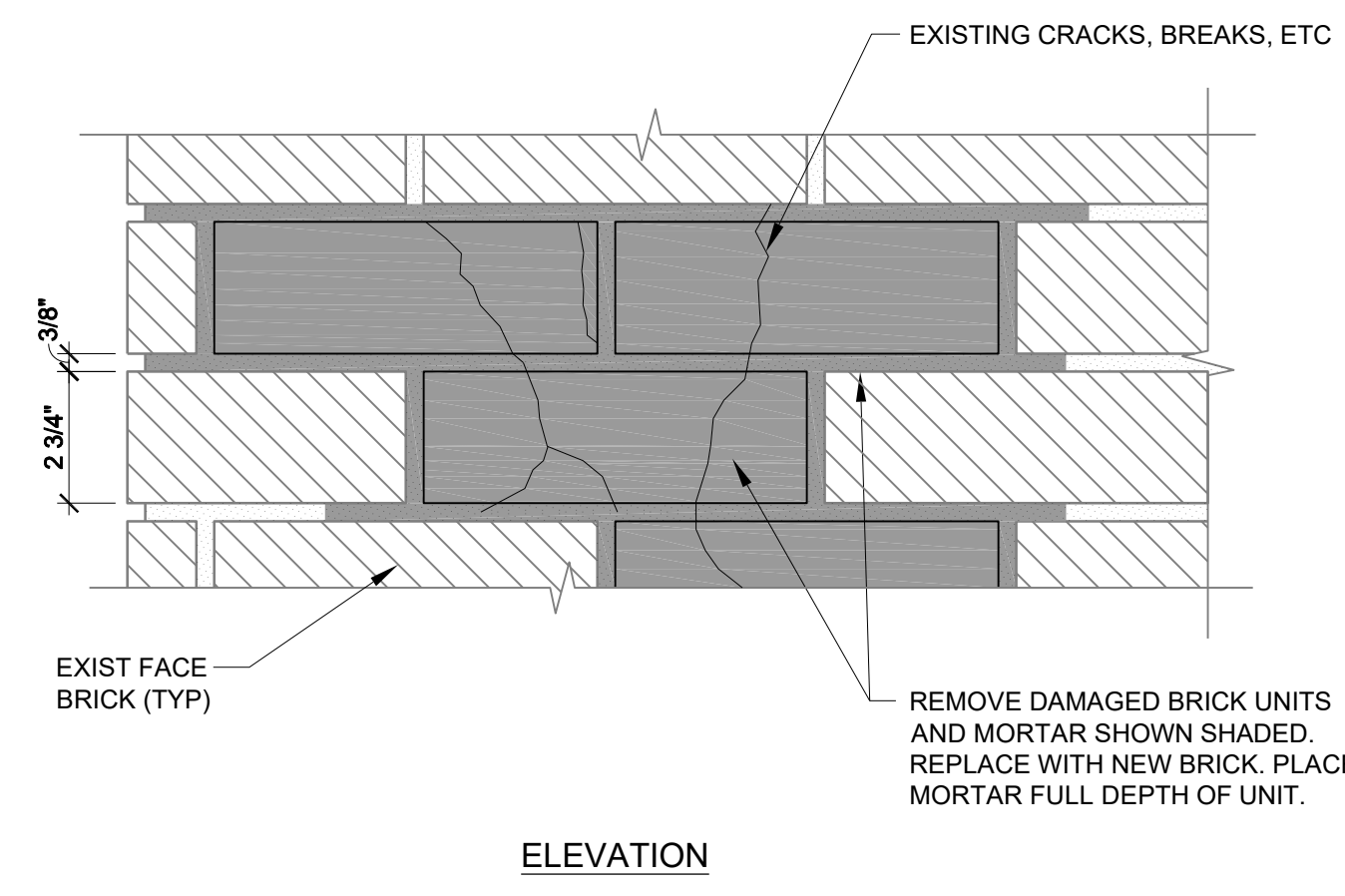
- NOTE:
1. IF GLAZING GASKETS ARE PRESENT, OR GLAZING TAPE EXTENDS BEYOND FRAME, CUT BACK GASKET / TAPE FLUSH WITH FRAME. DO NOT DAMAGE GLASS.

95.2 WINDOW GLAZING SILICONE



- NOTES:
1. PAY UNIT INCLUDES MORTAR REPLACEMENT, PROVIDING CORNER UNITS, BOND BEAM UNITS, ETC. AS REQUIRED TO REPAIR ALL DAMAGED CMU.
 2. INCIDENTAL TO THIS WORK IS PROVIDING NEW TRUSS OR LADDER TYPE REINFORCEMENT TO MATCH EXISTING. LAP MINIMUM ONE BLOCK LENGTH.
 3. CONTRACTOR SHALL SUPPORT REMAINING AREAS OF CMU DURING REPAIRS.

80.3 REMOVE AND REPLACE CMU



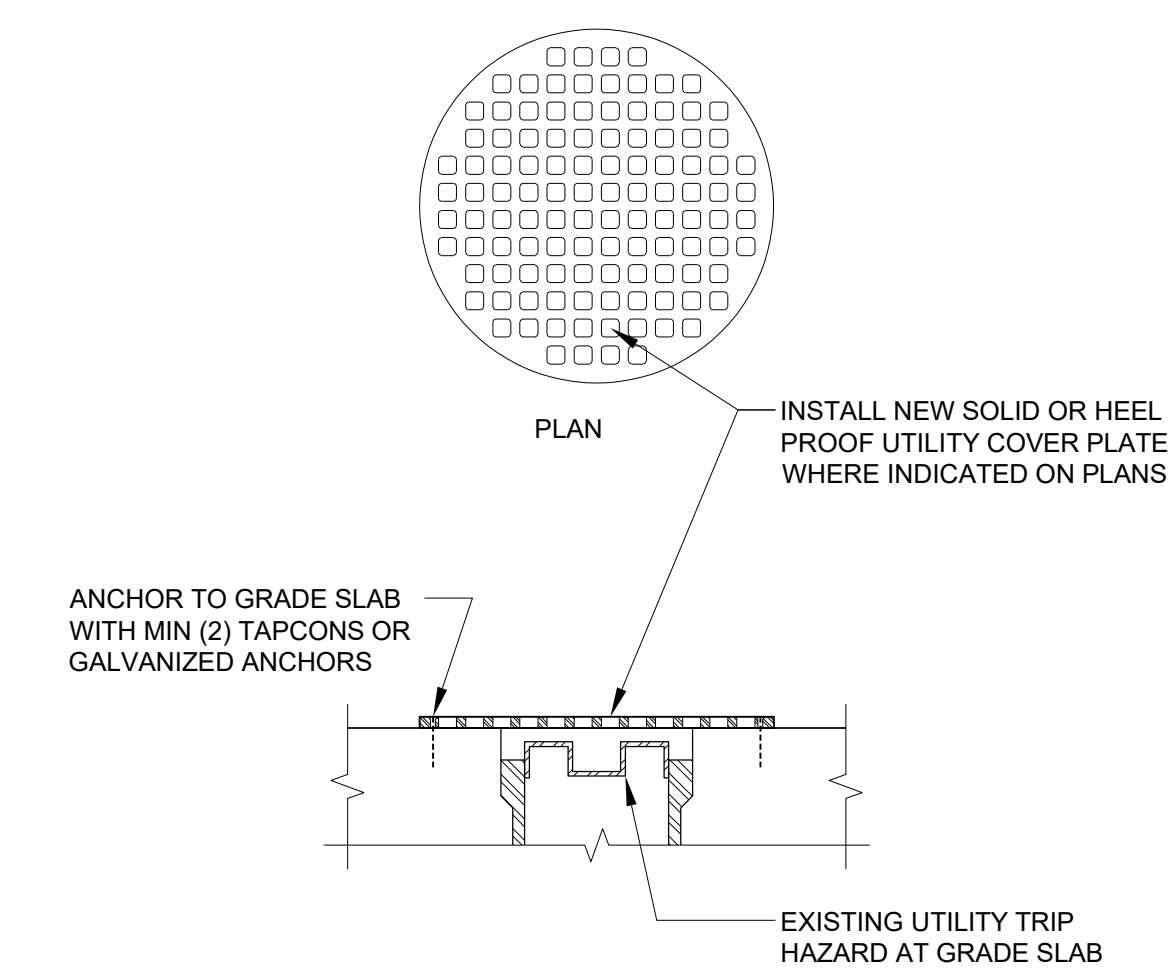
- NOTES:
1. MORTAR JOINT REPLACEMENT AT BRICK MASONRY UNIT REPLACEMENT LOCATIONS IS INCIDENTAL. NO EXTRA PAYMENT UNDER TUCKPOINTING WORK ITEM.
 2. DO NOT DAMAGE ADJACENT BRICK BY OVERCUTTING.
 3. REPLACEMENT BRICK TO BE APPROVED BY ENGINEER AND/OR OWNER PRIOR TO START OF WORK.

80.1 REMOVE AND REPLACE BRICK

45.8 PAINT RAILING
(REFERENCE)

43.4 REPLACE RAILING ANCHORS
(REFERENCE)

43.3 RAILING REPAIR
(REFERENCE)



- NOTES:
1. CONTRACTOR SHALL PROVIDE AND INSTALL NEW COVER PLATES AT EXISTING UTILITY TERMINATIONS AT GRADE SLAB SURFACES. COVER PLATES MAY BE SOLID OR HEEL PROOF GRATING. WADE STD8 900-G8 REPLACEMENT GRATE SHOWN. PROVIDE SUBMITTAL RECOMMENDATIONS TO ENGINEER FOR APPROVAL.
 2. NEW GRATES SHALL BE ANCHORED TO SLAB AT AT LEAST (2) POINTS, AND MUST BE LARGE ENOUGH IN DIAMETER TO COVER ENTIRE UTILITY OPENING. ANCHORS SHALL BE CORROSION RESISTANT AND SUITABLE FOR ANCHORING INTO CONCRETE.

25.9 MECHANICAL - INSTALL UTILITY COVER PLATES

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