

MISCELLANEOUS CONCRETE REPAIRS

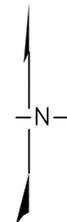
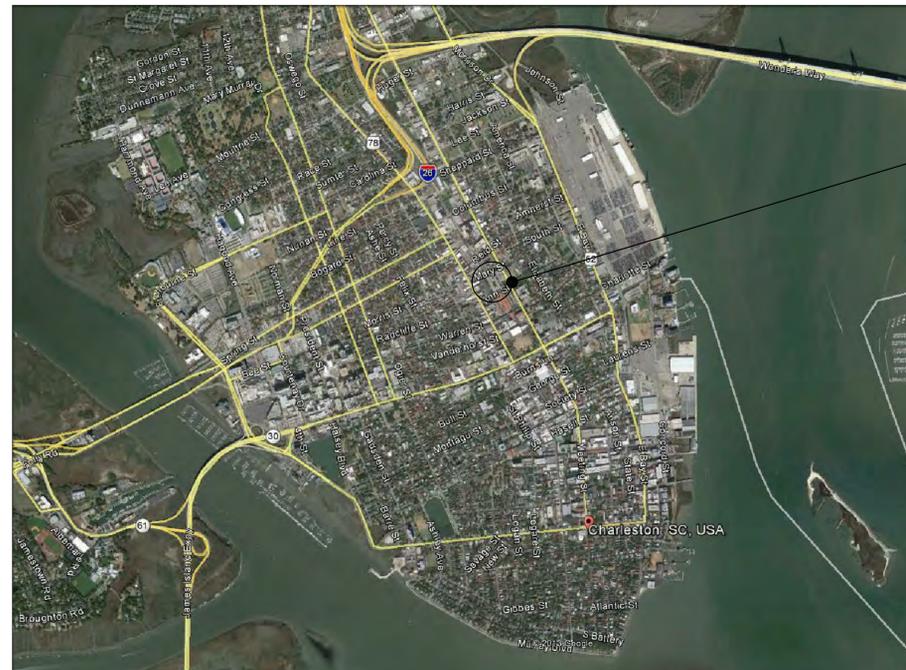
VRTC PARKING GARAGE 2016

CHARLESTON, SC
JMT PROJECT NO.: 13-0493-013

CLIENT:



CITY OF CHARLESTON: DEPARTMENT OF PARKS
823 MEETING ST.
CHARLESTON, SC 29403



PROJECT LOCATION

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PROJECT LOCATION



Know what's below.
Call before you dig.

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PLAN PREPARED BY:



JMT, INC.
952 HOUSTON NORTHCUTT BLVD.,
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ENGINEER OF RECORD

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APPROXIMATE LOCATION OF THE SITE
LONGITUDE: 32° 47' 25.7"
LATITUDE: 79° 56' 15.6"

GENERAL NOTES

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH FEDERAL, STATE AND LOCAL LAWS.
2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS SPECIFIED ON THESE CONTRACT PLANS AND WITH THE CONTRACT PROJECT SPECIFICATIONS, HEREIN REFERRED TO AS "THE SPECIFICATIONS".
3. ONCE ON SITE THE CONTRACTOR SHALL COMPLETE A SURVEY OF THE PROJECT SITE TO VERIFY THE EXISTING CONDITIONS. ANY CONDITIONS FOUND BY THE CONTRACTOR THAT WERE NOT ANTICIPATED ON THE CONTRACT PLANS AND THAT WILL AFFECT THE COST OF IMPLEMENTATION OF THE SPECIFIED PROJECT SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER.
4. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE ONE PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE REMAINING PARTS OF THE CONTRACT DOCUMENTS. SPECIFICATIONS HAVE BEEN ISSUED IN CONJUNCTION WITH THESE DRAWINGS. FOR ADDITIONAL INFORMATION NOT SHOWN IN DRAWINGS, SEE CONTRACT SPECIFICATIONS.
5. "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UON "SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UON.
6. IN CASES, IF ANY, WHERE REQUIREMENTS INDICATED ON THE STRUCTURAL DRAWINGS DIFFER FROM THE SPECIFICATIONS, NOTIFY THE STRUCTURAL ENGINEER. FOR PRICING, ASSUME THAT THE DRAWINGS TAKE PRECEDENCE OVER THE SPECIFICATIONS IN THE CASE OF ANY CONFLICTS.
7. ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL OR DETAIL TITLE OR NOTE.
8. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
9. LOCATIONS AND QUANTITIES SHOWN ON THESE PLANS ARE APPROXIMATE FOR BIDDING PURPOSES. ACTUAL FIELD INSTALLED QUANTITIES MAY VARY. CONTRACTOR SHALL VERIFY LOCATIONS AND QUANTITIES WITH ENGINEER PRIOR TO BEGINNING WORK ON ALL PAY ITEMS.
10. ALL MOBILIZATION, LABOR AND MATERIALS AND OTHER COSTS TO THE CONTRACTOR TO BE INCURRED DURING PERFORMANCE OF WORK ON ANY PAY ITEMS IN THIS CONTRACT SHALL BE INCLUDED IN THE UNIT COST BID FOR EACH PAY ITEM. THIS INCLUDES COORDINATION EFFORTS AND ANY TRAFFIC CONTROL REQUIRED TO PERFORM REPAIR OPERATIONS.
11. THE CITY OF CHARLESTON RESERVES THE RIGHT TO ADD OR DELETE QUANTITIES FROM THIS CONTRACT ACCORDING TO THEIR NEEDS AND BUDGET REQUIREMENTS.
12. PERFORMANCE OF ALL OPERATIONS IN AND AROUND THE PARKING GARAGES DEFINED IN THIS PROJECT SHALL BE COORDINATED WITH THE CITY OF CHARLESTON AND THE CITY'S PARKING GARAGE OPERATOR ABM PARKING SERVICES, CONTACT: JOHN LEAF, (216)535-0164, JOHN.LEAF@ABM.COM.
13. MAINTENANCE OF TRAFFIC PLANS SHALL BE SUBMITTED TO THE CITY AND ABM PARKING SERVICES FOR APPROVAL PRIOR TO THE BEGINNING OF ANY WORK IN AND AROUND THE GARAGES THAT WILL IMPACT TRAFFIC MOVEMENT, BLOCK PARKING SPACES OR OTHERWISE GARAGE OPERATIONS.
14. OPERATIONS REQUIRING AUTOMOBILE AND/OR PEDESTRIAN TRAFFIC TO BE DIVERTED AROUND A PARTICULAR LOCATION, SHALL BE PERFORMED USING APPROVED TRAFFIC CONTROL DEVICES. THE CONTRACTOR MAY STAGE THESE OPERATIONS DURING DAYTIME OPERATING HOURS OR DURING PERIODS OF MINIMAL GARAGE OCCUPANCY AT THE CONTRACTOR'S OPTION AND TO BE COORDINATED WITH THE CITY AND ABM PARKING SERVICES.
15. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO DUST, NOISE AND DEBRIS CONTROL THROUGHOUT THE DURATION OF THIS PROJECT. A CLEAN WORK SITE SHALL BE MAINTAINED AT ALL TIMES. CITY ORDINANCES REGARDING WORKING HOURS AND NOISE LEVELS SHALL BE ADHERED TO. AT NO TIME SHALL NOISY ACTIVITIES BE PERFORMED IN RESIDENTIAL AREAS OR NEAR HOTELS BETWEEN THE HOURS OF 7 PM AND 7 AM.
16. THE CONTRACTOR SHALL GIVE THE CITY AND ABM PARKING SERVICES AT LEAST THREE(3)DAYS WRITTEN NOTICE WHEN OPERATIONS SHALL IMPACT PARKING SPACES, TRAFFIC FLOW OR OTHER GARAGE OPERATIONS SO THAT THE PUBLIC CAN BE NOTIFIED. CONTRACTOR MAY BLOCK PARKING SPACES NECESSARY FOR THE PERFORMANCE OF AN OPERATION TWO (2) DAYS PRIOR TO PERFORMANCE OF THAT OPERATION SUBJECT TO COORDINATION WITH REPUBLIC PARKING.
17. AUTOMOBILES PARKED IN THE GARAGE IN THE VICINITY OF ON-GOING WORK SHALL BE PROTECTED AT ALL TIMES.
18. EVERY ATTEMPT SHALL BE MADE BY THE CONTRACTOR, THROUGH COORDINATION WITH ABM PARKING SERVICES, TO NOTIFY GARAGE PATRONS OF UPCOMING OPERATIONS AND THE BLOCKING-OFF OF SPACES. IF AUTOMOBILES HAVE NOT BEEN REMOVED FROM THE SPACES NECESSARY FOR THE CONTRACTOR TO PERFORM AN OPERATION AFTER THE PUBLIC HAS BEEN GIVEN AT LEAST THREE (3) DAYS NOTICE, THE CONTRACTOR SHALL NOTIFY ABM PARKING SERVICES IMMEDIATELY. IF THE OWNER CAN NOT BE CONTACTED AND THE AUTOMOBILE CAN NOT BE REMOVED, THE CONTRACTOR MAY REQUEST THE CITY TO HAVE THE AUTOMOBILE MOVED TO A SUITABLE LOCATION IN THE GARAGE AWAY FROM THE WORK ZONE.
19. THE PARKING GARAGE SHALL MAINTAIN PUBLIC ACCESS AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EQUIPMENT AND MATERIALS NECESSARY TO PERFORM WORK AND FOR ENSURING THE SAFETY OF THE PUBLIC. CONTRACTOR'S WORK SITE SHALL BE CLEANED OF ALL DEBRIS AT THE END OF EACH OPERATION. NEWLY INSTALLED WORK SHALL BE PROTECTED UNTIL SUCH TIME AS IT CAN BE DRIVEN OR WALKED UPON.
20. THE CONTRACTOR SHALL REPLACE ANY EXISTING PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION PROCEDURES AT THE END OF THE ACTIVITY CAUSING THE DAMAGE. PAYMENT FOR THE REPLACEMENT OF SUCH MARKINGS SHALL BE INCLUDED IN THE UNIT COST BID FOR THAT ITEM, UNLESS SHOWN OTHERWISE.
21. CONSTRUCTION ACTIVITY DESCRIPTIONS LISTED IN THESE PLANS ARE NOT MEANT TO BE ALL INCLUSIVE, BUT RATHER TO OUTLINE THE GENERAL WORK TASKS. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER EXECUTION OF THE WORK AND ADHERENCE TO ALL MANUFACTURER'S RECOMMENDATIONS REGARDING INSTALLATION OF WORK WHEN PROPRIETARY PRODUCTS ARE USED.
22. SUCCESSFUL CONTRACTOR MAY REQUEST TO BORROW ORIGINAL PARKING GARAGE PLANS TO MAKE COPIES AS REQUIRED AT CONTRACTOR'S EXPENSE.
23. CONTRACTOR SHALL PROVIDE ADVANCE NOTIFICATION TO CITY/ENGINEER PRIOR TO COMPLETION OF WORK, SO THAT COMPLETION MAY BE VERIFIED PRIOR TO DEMOBILIZATION.
24. THE CONTRACTOR MAY USE 4 PARKING SPACES FOR STORAGE OR STAGING AND HAVE 2 PARKING SPACES FOR PARKING. THESE 6 PARKING SPACES SHALL BE LOCATED BY THE CITY ON THE TOP LEVEL. ONLY MATERIALS BEING ACTIVELY USED MAY BE KEPT ON-SITE. LONG TERM STORAGE SHOULD BE KEPT OFF-SITE IN A TRAILER OR OTHER LOCATION.
25. THE CONTRACTOR WILL HAVE ACCESS TO WATER, ELECTRICITY, AND TOLIETS ON SITE AT THE GARAGE. THESE WILL BE AVAILABLE AT NO COST TO THE CONTRACTOR .

CODES AND SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE PERFORMED IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UON:

BUILDING CODE : INTERNATIONAL BUILDING CODE 2016

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES, UON:
 - PLATES, ANGLES, CHANNELS: ASTM A36
 - HOLLOW STRUCTURAL SECTIONS: ASTM A500, GRADE B OR 1085
2. FOR ALL STEEL MEMBERS AND EMBEDMENTS, PROVIDE HOT-DIPPED GALVANIZED STEEL.
3. SUBMIT COMPLETE ERECTION AND DETAILED SHOP DRAWINGS OF ALL STRUCTURAL STEEL TO THE ENGINEER FOR REVIEW. MARK ALL ITEMS OF STRUCTURAL STEEL, SHOWING SIZES, LENGTHS, LOCATIONS, COPES, HOLES, OPENINGS AND ASTM DESIGNATIONS.
4. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
5. FABRICATE AND ERECT STEEL IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION.
6. DURING ERECTION, STRUCTURAL STEEL FRAME SHALL BE ADEQUATELY BRACED IN ALL LINES, TWO WAYS.

STRUCTURAL STEEL CONNECTIONS

1. STRUCTURAL STEEL CONNECTION MATERIAL SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:
 - ANGLES: ASTM A36
 - PLATES: ASTM A36
 - BOLTS, NUTS, WASHERS: ASTM A325
 - WELD ELECTRODES: E70XX
2. THE DESIGN AND DETAILING OF ALL CONNECTIONS SHALL COMPLY WITH ALL APPLICABLE CODES AND SPECIFICATION SECTIONS.
3. ALL WELDING SHALL BE PERFORMED BY PREQUALIFIED WELDERS, AND SHALL CONFORM TO THE REQUIREMENTS OF THE STRUCTURAL WELDING CODE, ANSI/AWS D1.1, LATEST EDITION, UON. ALL WELDING ELECTRODES SHALL COMPLY WITH THE REQUIREMENTS OF TABLE 4.1 OF THE STRUCTURAL WELDING CODE, ANSI/AWS D1.1, LATEST EDITION.
4. COLD GALVANIZE EXPOSED WELDS.
5. WELDS NOT OTHERWISE NOTED ON DRAWINGS SHALL BE CONTINUOUS FILLET WELDS. THE MINIMUM SIZE SHALL BE 1/4" OR AS REQUIRED BY THE AISC SPECIFICATIONS, WHICHEVER IS LARGER. THE MINIMUM WELD LENGTH SHALL BE 3".

REINFORCING STEEL

1. REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:
 - DEFORMED BARS: ASTM A615, GRADE 60
 - WELDED WIRE FABRIC: ASTM A185
2. DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315.
3. WHERE A 90-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 90-DEG. HOOK. WHERE A 135-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 135-DEG. HOOK. WHERE A 180-DEG. HOOK IS GRAPHICALLY INDICATED, PROVIDE ACI STANDARD 180-DEG. HOOK.
4. WHERE DOWELS ARE INDICATED BUT NOT SIZED, PROVIDE DOWELS THAT MATCH SIZE AND LOCATION OF MAIN REINFORCEMENT AND LAP SPLICE WITH THE MAIN REINFORCEMENT.
5. REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE PROTECTION (CLEAR COVER), UON:
 - FORMED SURFACES EXPOSED TO WEATHER: 2"

CONTRACTOR RESPONSIBILITIES AND COORDINATION

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS FOR SUCCESSFUL COMPLETION OF THIS PROJECT.
2. THE SPECIFICATIONS AND STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UON. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS, NEW AND EXISTING, BY MEASUREMENTS AT THE JOB SITE. THE CONTRACTOR SHALL TAKE ANY AND ALL OTHER MEASUREMENTS NECESSARY TO VERIFY CONFORMANCE WITH THE DRAWINGS AND TO PERFORM THE WORK PROPERLY.
4. ALL FIELDWORK SHALL BE COORDINATED AND CONTINUOUSLY SUPERVISED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL MAKE NO DEVIATION FROM THE DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
6. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
7. CONTRACTOR IS RESPONSIBLE FOR SAFETY OF THE SITE AND ALL PERSONS ON THE SITE UNTIL PROJECT IS COMPLETE.
8. PROVIDE, ERECT, AND MAINTAIN PROTECTIVE TEMPORARY BARRIERS AND SECURITY DEVICES AROUND WORK.
9. PROTECT AND KEEP OPERABLE EXISTING SITE FEATURES WHICH ARE NOT TO BE SELECTIVELY DEMOLISHED OR TEMPORARILY REMOVED.
10. VIBRATION DURING SELECTIVE DEMOLITION SHALL BE MINIMIZED. CONTRACTOR SHALL COORDINATE SELECTIVE DEMOLITION WORK WITH CITY.
11. COMPLY WITH RECOMMENDATIONS OF MANUFACTURER OF CLEANING FOR PROTECTING SURROUNDING SURFACES AGAINST DAMAGE FROM EXPOSURE TO THEIR PRODUCTS.
12. CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED TESTING FOR QUALITY ASSURANCE.

PAYMENT

1. CONTRACTOR IS TO BID THE ENTIRE PROJECT AS A "LUMP SUM" TO PERFORM WORK INDICATED AT LOCATIONS SHOWN. THE CONTRACTOR HAS THE RESPONSIBILITY TO MAKE A SITE VISIT AND DETERMINE QUANTITIES TO RESPONSIBLY BID THE JOB. ALL QUANTITIES PROVIDED ARE FOR REFERENCE ONLY. UNIT PRICES SHALL BE PROVIDED WITH THE BID FOR THE PURPOSE OF DELETING OR ADDING WORK ITEMS AT THE CITY'S DISCRETION.

SUMMARY OF ESTIMATED QUANTITIES

PAY ITEM NUMBER	PAY ITEM	UNIT	TOTAL
0100	REPAIR TYPE 1	LF	11000
0200	REPAIR TYPE 2	EA	37
0300	REPAIR TYPE 3	EA	2
0400	REPAIR TYPE 4	EA	1
0500	REPAIR TYPE 5	EA	1
0600	REPAIR TYPE 6	EA	8

NOTE: QUANTITIES PROVIDED ARE FOR GUIDANCE ONLY. CONTRACTOR SHALL DETERMINE QUANTITIES ON WHICH TO RESPONSIBLY BASE THEIR LUMP SUM BID.

PRODUCTS

1. COMPLY WITH ALL MANUFACTURER'S PRODUCT REQUIREMENTS AND RECOMMENDATIONS FOR HANDLING, STORING, PREPARATION, INSTALLATION AND CURING.
2. PRODUCTS ARE SPECIFIED TO ESTABLISH A QUALITY AND TYPE OF MATERIAL DESIRED. ALL PRODUCTS ARE TO BE SPECIFIED PRODUCT OR APPROVED EQUAL. CONTRACTOR SHALL SUBMIT PRODUCTS DESIRED FOR A SUBSTITUTION PRIOR TO INSTALLATION. SEE SPECIFICATIONS FOR MORE INFORMATION.



**CITY OF
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DEPT OF
PARKS**

823 MEETING ST.
CHARLESTON, SC 29403
(843) 579-7552



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**MISC.
CONCRETE
REPAIRS
VRTC
PARKING
GARAGE
2016**

GENERAL NOTES

PROJECT NUMBER: 13-0493-013

Sym.	Revisions	Date

Drawn by: SB

Design by: SB

Checked by: DO

Scale: AS NOTED

Date: 10/2016



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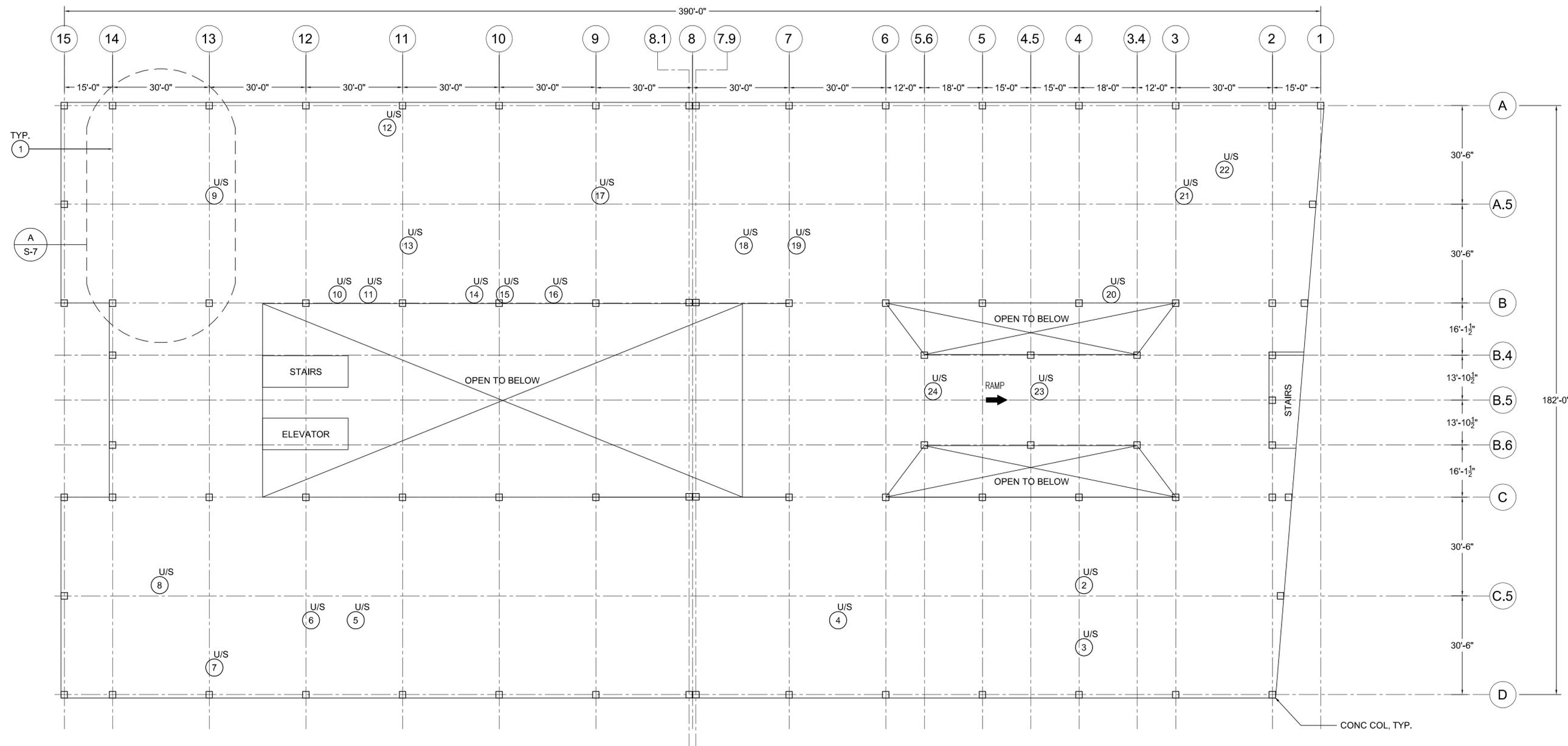
**MISC. CONCRETE REPAIRS
VRTC PARKING GARAGE
2016**

ROOF PLAN

PROJECT NUMBER: 13-0493-013

Sym.	Revisions	Date

Drawn by: SB
Design by: SB
Checked by: DO
Scale: AS NOTED
Date: 10/2016



FIFTH FLOOR (ROOF)

LEGEND
U/S UNDERSIDE

MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
①	ROOF DECK	FAILING JOINTS AT THE ROOF	-	REPAIR TYPE 1
②	DOUBLE T @ C.5/4	SPALL WITH EXPOSED REBAR	15" x 4" x 3"	REPAIR TYPE 2
③	DOUBLE T @ C.5-D/4	SPALL WITH EXPOSED REBAR	12" x 4" x 2"	REPAIR TYPE 2
④	DOUBLE T @ C.5-D/6-7	3 SPALLS WITH EXPOSED REBAR	15" x 3" x 3" MAXIMUM	REPAIR TYPE 2
⑤	DOUBLE T @ C.5/11-12	2 IMPENDING SPALL	12" x 3" MAXIMUM	REPAIR TYPE 2
⑥	DOUBLE T @ C.5/12	2 SPALLS WITH EXPOSED REBAR, 1 IMPENDING SPALL	12" x 3" x 2" MAXIMUM	REPAIR TYPE 2
⑦	DOUBLE T @ C.5-D/13	1 SPALL WITH EXPOSED REBAR, 1 IMPENDING SPALL	12" x 2" x 2" MAXIMUM	REPAIR TYPE 2
⑧	DOUBLE T @ B-C/13-14	3 SPALL WITH EXPOSED REBAR, 1 IMPENDING SPALL	15" x 3" x 2" MAXIMUM	REPAIR TYPE 2

MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
⑨	DOUBLE T @ C.5/13	SPALL WITH EXPOSED REBAR	6" x 2" x 2"	REPAIR TYPE 2
⑩	DOUBLE T @ B/11-12	SPALL WITH EXPOSED REBAR	6" x 2" x 2"	REPAIR TYPE 2
⑪	DOUBLE T @ B-C.5/11-12	2 SPALLS WITH EXPOSED REBAR	8" x 2" x 2" MAXIMUM	REPAIR TYPE 2
⑫	DOUBLE T @ A/11	SPALL WITH EXPOSED REBAR	52" x 4"	REPAIR TYPE 2
⑬	DOUBLE T @ A.5/11	1 SPALL WITH EXPOSED REBAR, 1 IMPENDING SPALL	12" x 2" x 2" MAXIMUM	REPAIR TYPE 2
⑭	DOUBLE T @ B/10-11	SPALL WITH EXPOSED REBAR	6" x 2" x 2"	REPAIR TYPE 2
⑮	DOUBLE T @ B/10	SPALL WITH EXPOSED REBAR	24" x 1" x 1"	REPAIR TYPE 2
⑯	DOUBLE T @ B/9-10	SPALL WITH EXPOSED REBAR	8" x 3" x 2"	REPAIR TYPE 2

MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
⑰	DOUBLE T @ A-B/9	2 SPALL WITH EXPOSED REBAR, 1 IMPENDING SPALL	12" x 2" x 2" MAXIMUM	REPAIR TYPE 2
⑱	DOUBLE T @ A.5/7-8	SPALL WITH EXPOSED REBAR	8" x 2" x 2"	REPAIR TYPE 2
⑲	DOUBLE T @ A.5-B/7	2 SPALLS WITH EXPOSED REBAR	12" x 2" x 2" MAXIMUM	REPAIR TYPE 2
⑳	DOUBLE T @ B/3-4	SPALL WITH EXPOSED REBAR	9" x 3" x 2"	REPAIR TYPE 2
㉑	DOUBLE T @ A.5/3	SPALL WITH EXPOSED REBAR	8" x 1" x 1"	REPAIR TYPE 2
㉒	DOUBLE T @ A.5/2-3	SPALL WITH EXPOSED REBAR	15" x 3" x 3"	REPAIR TYPE 2
㉓	DOUBLE T @ B.3-B.7/4.5	SPALL WITH EXPOSED REBAR	12" x 3" x 3"	REPAIR TYPE 2
㉔	DOUBLE T @ B.3-B.7/5.6	BEARING WALKING OUT	-	REPAIR TYPE 3

REQUIRED REPAIR AREA/VOLUME MAY VARY FROM VISIBLE DAMAGE EXTENT NOTED. CONTRACTOR TO MAKE OWN ASSESMENT OF REQUIRED WORK AT EACH LOCATION WHEN PREPARING BID/ESTIMATE.



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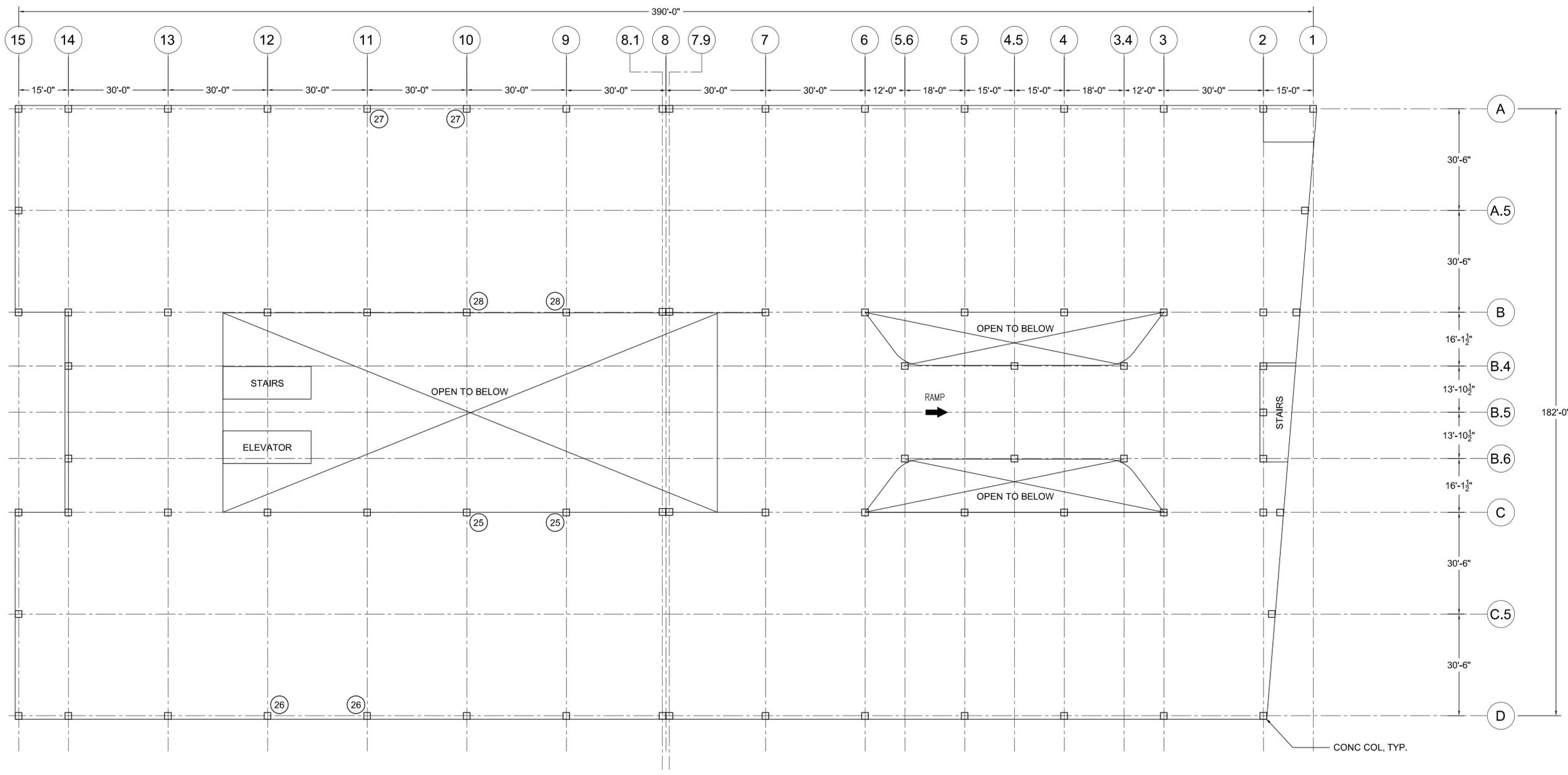
MISC. CONCRETE REPAIRS
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FOURTH FLOOR PLAN

PROJECT NUMBER: 13-0493-013

Sym.	Revisions	Date

Drawn by: SB
Design by: SB
Checked by: DO
Scale: AS NOTED
Date: 10/2016



FOURTH FLOOR

LEGEND
U/S UNDERSIDE

REPAIR SCHEDULE				
MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
25	COL/BRACED FRAME @ C/9-10	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
26	COL/BRACED FRAME @ D/11-12	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
27	COL/BRACED FRAME @ A/10-11	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
28	COL/BRACED FRAME @ B/9-10	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1

REQUIRED REPAIR AREA/VOLUME MAY VARY FROM VISIBLE DAMAGE EXTENT NOTED. CONTRACTOR TO MAKE OWN ASSESSMENT OF REQUIRED WORK AT EACH LOCATION WHEN PREPARING BID/ESTIMATE.



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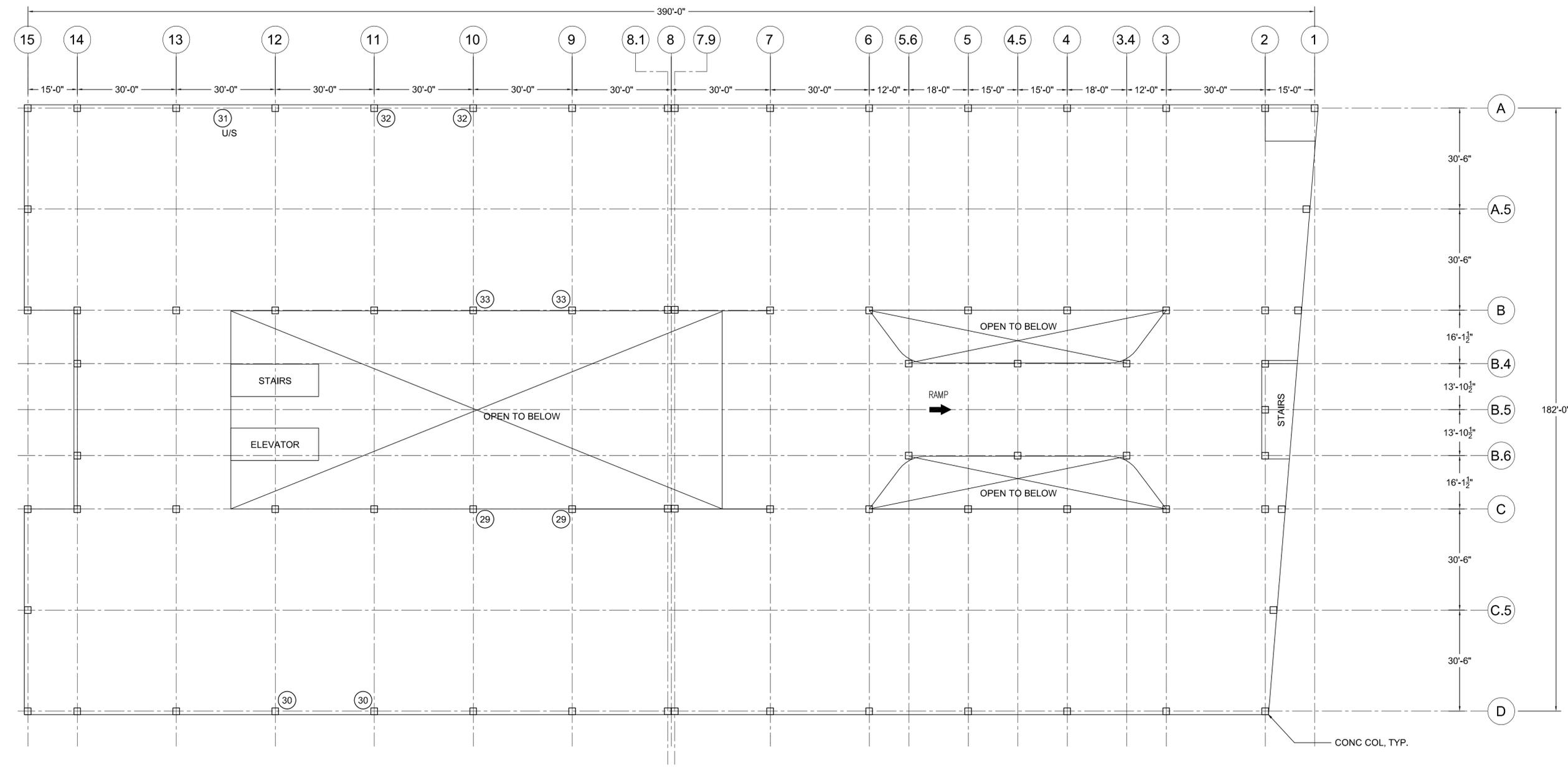


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THIRD FLOOR

LEGEND
U/S UNDERSIDE

REPAIR SCHEDULE				
MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
29	COL/BRACED FRAME @ C/9-10	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
30	COL/BRACED FRAME @ D/11-12	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
31	DOUBLE T @ A/12-13	BEARING WALKING OUT	-	REPAIR TYPE 3
32	COL/BRACED FRAME @ A/10-11	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1
33	COL/BRACED FRAME @ B/9-10	SPALL/IMPENDING SPALL AT BRACED FRAME AND COL CONNECTION	-	REPAIR TYPE 6 - ADD ALT #1

REQUIRED REPAIR AREA/VOLUME MAY VARY FROM VISIBLE DAMAGE EXTENT NOTED. CONTRACTOR TO MAKE OWN ASSESMENT OF REQUIRED WORK AT EACH LOCATION WHEN PREPARING BID/ESTIMATE.

THIRD FLOOR PLAN

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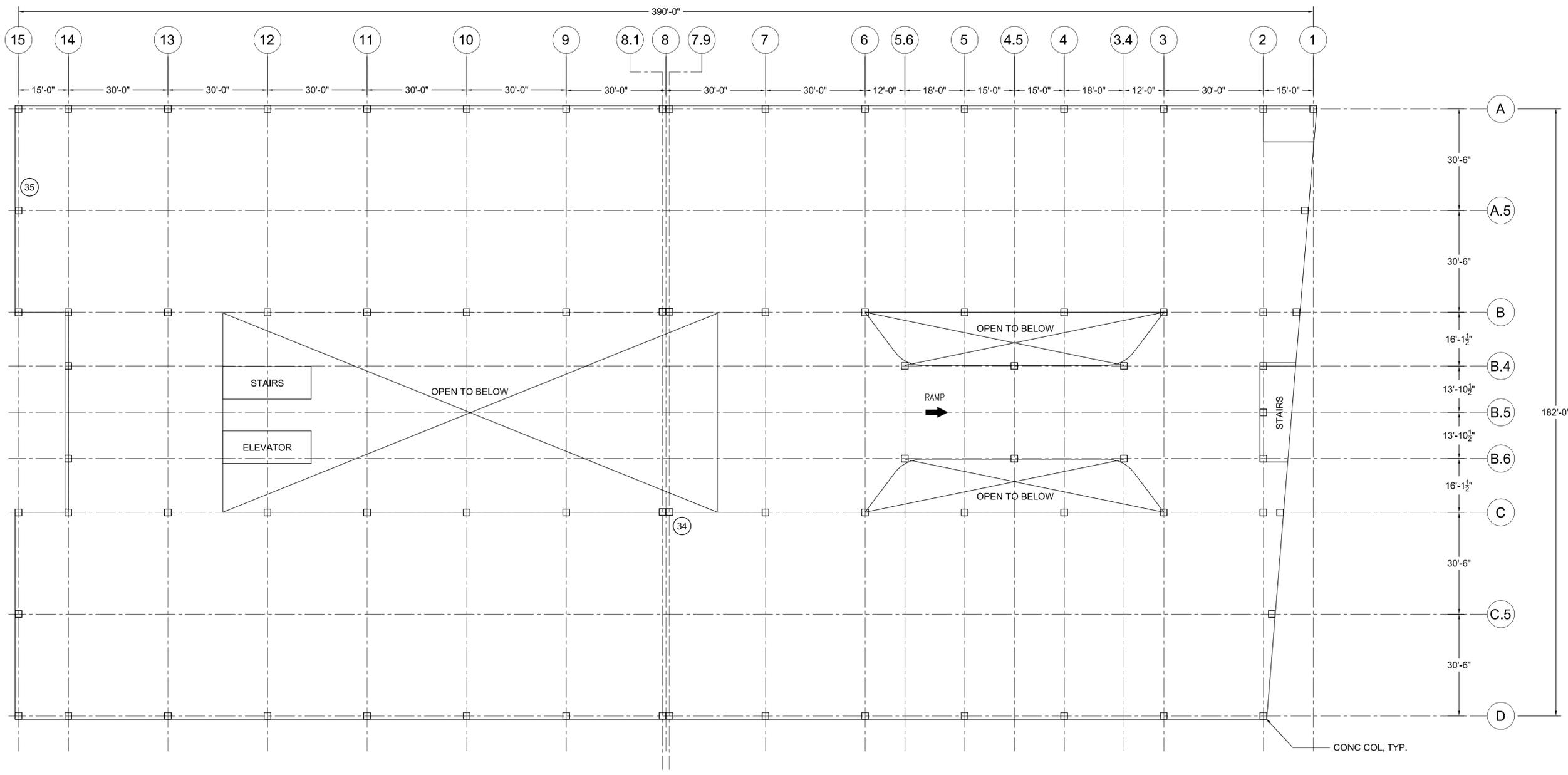
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SECOND FLOOR
PLAN

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SECOND FLOOR

LEGEND
U/S UNDERSIDE

REPAIR SCHEDULE				
MARK	LOCATION	DESCRIPTION	VISIBLE DAMAGE EXTENT	REPAIR
34	COL/BRACED FRAME @ C/7.9	CRACK AT BRACED FRAME BASE PLATE	1/8" X 12"	REPAIR TYPE 4
35	PARAPET @ A-A.5/15	MISSING ANGLE AT PARAPET	-	REPAIR TYPE 5

REQUIRED REPAIR AREA/VOLUME MAY VARY FROM VISIBLE DAMAGE EXTENT NOTED. CONTRACTOR TO MAKE OWN ASSESSMENT OF REQUIRED WORK AT EACH LOCATION WHEN PREPARING BID/ESTIMATE.



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MISC.
CONCRETE
REPAIRS
VRTC
PARKING
GARAGE
2016

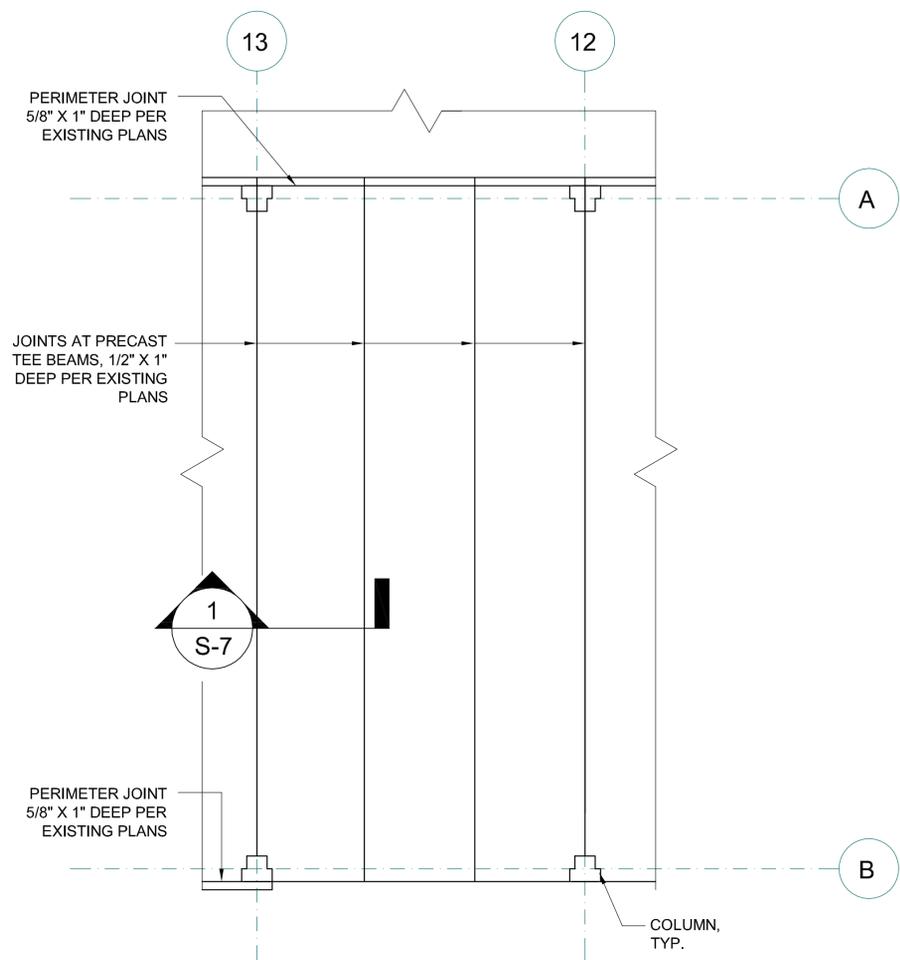
REPAIR TYPE 1

PROJECT NUMBER: 13-0493-013

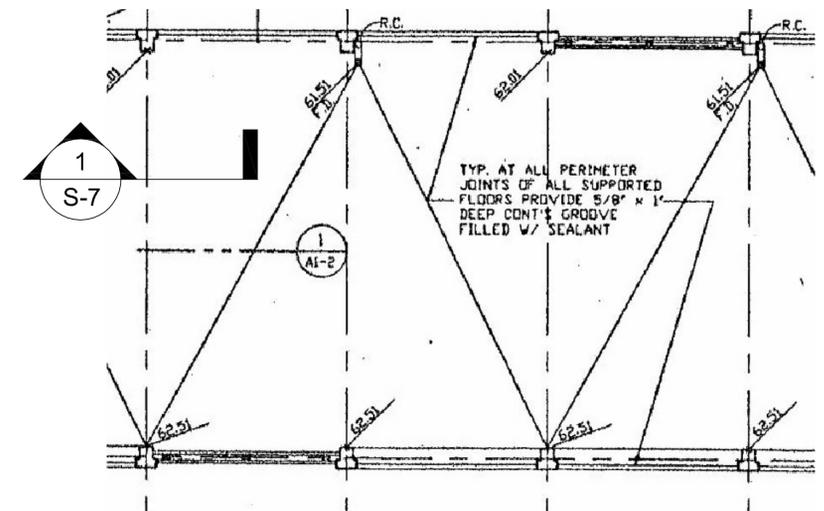
Sym.	Revisions	Date

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S-7



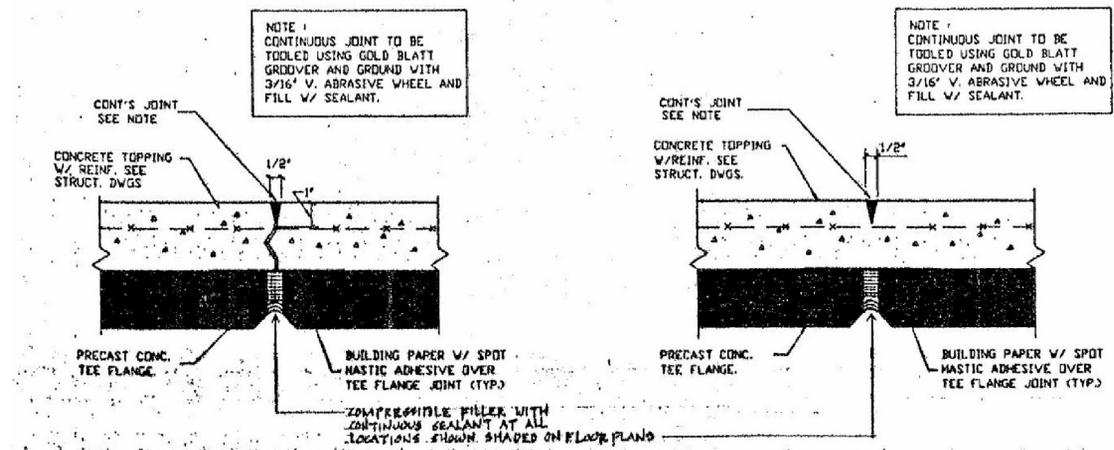
A PART PLAN
SCALE: N.T.S.



B PART PLAN FROM EXISTING PLANS
SCALE: N.T.S.

JOINT SEALING NOTES

- FOR THE JOINT SEALANT REPLACEMENT DETAIL, ALL EXISTING CONTROL AND CONSTRUCTION JOINTS ON THE ROOF ARE TO HAVE THE EXISTING SEALANT REMOVED AND REPLACED.
- FOR ADDITIONAL INFORMATION NOT SHOWN IN DRAWINGS, SEE CONTRACT SPECIFICATIONS.
- LOCATIONS AND QUANTITIES SHOWN ON THESE PLANS ARE APPROXIMATE FOR BIDDING PURPOSES. ACTUAL FIELD INSTALLED QUANTITIES MAY VARY. CONTRACTOR SHALL VERIFY LOCATIONS AND QUANTITIES WITH ENGINEER PRIOR TO BEGINNING WORK ON ALL PAY ITEMS.
- FOR JOINT LOCATION, FOLLOW CLEAN AND PREPARATION RECOMMENDATIONS OF MANUFACTURER AND REMOVE ALL REMNANTS OF EXISTING JOINT MATERIAL.
- THE JOINT AND ADJACENT SUBSTRATE MUST BE CLEAN, DRY, SOUND AND FREE OF SURFACE CONTAMINANTS. REMOVE ALL TRACES OF THE OLD SEALANT, DUST, LAITANCE, GREASE, OILS, CURING COMPOUNDS, FORM RELEASE AGENTS AND FOREIGN PARTICLES BY MECHANICAL MEANS, I.E. SANDBLASTING, ETC., AS APPROVED BY THE ENGINEER. BLOW JOINT FREE OF DUST USING COMPRESSED AIR LINE EQUIPPED WITH AN OIL TRAP.
- INSTALL APPROVED BACKER ROD OR BOND BREAKER TAPE IN ALL JOINTS SUBJECT TO THERMAL MOVEMENT TO PREVENT THREE-SIDED BONDING AND TO SET THE DEPTH OF THE SEALANT AT A MAXIMUM OF 1/2", MEASURED AT THE CENTER POINT OF THE JOINT WIDTH. APPROVAL OF THE BACKER ROD OR BOND BREAKER TAPE SHALL BE MADE BY THE ENGINEER.
- JOINTS SHALL BE MASKED TO PREVENT DISCOLORATION OR APPLICATION ON UNWANTED AREAS, AS DIRECTED BY THE ENGINEER. IF MASKING TAPE IS USED, IT SHALL NOT BE REMOVED BEFORE TOOLING, YET MUST BE REMOVED BEFORE THE INITIAL CURE OF THE SEALANT. DO NOT APPLY THE MASKING TAPE UNTIL JUST PRIOR TO THE SEALANT APPLICATION.
- INSTALL SEALANT INTO PREPARED JOINTS WHEN THE JOINT IS AT MID-POINT OF ITS EXPANSION AND CONTRACTION CYCLE. GUN OR EXTRUDE THE SEALANT INTO THE PREPARED JOINT IN ONE DIRECTION KEEPING A CONSTANT BEED. AVOID OVERLAPPING THE SEALANT TO ELIMINATE THE ENTRAPMENT OF AIR. TOOL AS REQUIRED TO PROPERLY FILL THE JOINT.
- SEALANT MUST BE RECESSED IN THE JOINT A MINIMUM OF 1/4" FROM THE SURFACE.
- ADHERE TO ALL LIMITATIONS AND CAUTIONS FOR THE SILICONE SEALANT IN THE MANUFACTURER'S PRINTED LITERATURE.



1 TYP. CONTROL AND CONST. JOINT DETAIL @ SUPPORTED FLOORS
SCALE: 3"=1'-0"

1 SECTION OF CONTROL AND CONST. JOINTS FROM EXISTING PLANS
SCALE: N.T.S.

REPAIR TYPE 1 DETAILS & NOTES

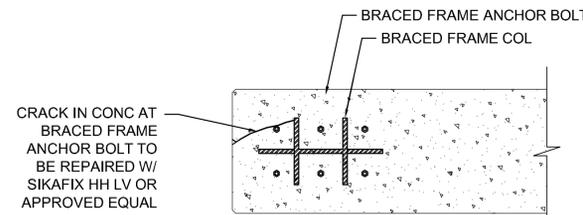
BEARING PAD REPLACEMENT NOTES

1. CONTRACTOR SHALL VERIFY LOCATIONS. IDENTIFIED REPAIRS ARE MARKED AS REPAIR TYPE 3.
2. EXISTING BEARING PADS TO BE REPLACED ARE APPROXIMATELY 1/4" X 7" X 6" PER EXISTING PLANS. EXISTING CONDITIONS MAY VARY AT EACH LOCATION. CONTRACTOR TO SURVEY/FIELD MEASURE PRIOR TO ORDERING MATERIAL AND STARTING FABRICATION.
3. SHORING, JACKING, AND SEQUENCE OF WORK SHALL BE THE CONTRACTORS RESPONSIBILITY AND SHALL BE DESIGNED TO MINIMIZE DIFFERENTIAL MOVEMENT AND COLLATERAL DAMAGE. REPAIR OF AREAS DAMAGED BY CONTRACTORS SEQUENCE OF WORK SHALL BE THE CONTRACTORS RESPONSIBILITY. SUPPORT/JACKING/SHORING PROCEDURE SHALL LIMIT THE DIFFERENTIAL MOVEMENT BETWEEN ADJACENT DOUBLE TEE STEMS SO AS TO AVOID CRACKING OF TOPPING SLAB.
4. ENDS OF DOUBLE TEES WILL REQUIRE TEMPORARY SUPPORT AND/OR JACKING/LIFTING IN ORDER TO REPLACE BEARING PADS. SEQUENCE OF WORK, NEW PAD DIMENSIONS, AND MATERIAL COMPRESSIBILITY SHALL BE ACCOUNTED FOR IN THE CONTRACTOR'S SEQUENCE OF WORK.
5. NEW PADS SHALL BE CENTERED UNDER THE DOUBLE TEE WEB WIDTH, AND CENTERED IN THE DEPTH OF THE SUPPORTING CONCRETE CORBEL. MINIMUM PAD DIMENSIONS TO BE 1/4" X 7" X 6" THICKNESS. TAPERED SHIMS OF A HIGH CAPACITY NON-COMPRESSIBLE MATERIAL SHALL BE USED WHERE TOP OF SUPPORT CORBEL AND BOTTOM OF DOUBLE TEE WEB ARE NOT PARALLEL SURFACES.
6. REPLACEMENT PADS TO BE CAPRALON DUCK PAD BY JVI INC. OR APPROVED EQUIVALENT. AN ADHESIVE COMPATIBLE WITH THE PAD SHALL BE USED TO ATTACH THE PAD TO THE BEARING SURFACES.
7. CONCRETE SURFACES TO RECEIVE NEW PADS SHALL BE CLEANED OF DEBRIS AND PREPARED PER PRODUCT RECOMMENDATIONS PRIOR TO INSTALLATION OF REPLACEMENT PAD.



PHOTOGRAPH OF TYPICAL EXISTING CONDITION FOR REPAIR TYPE 3

REPAIR TYPE 3



PART PLAN AT REPAIR TYPE 4

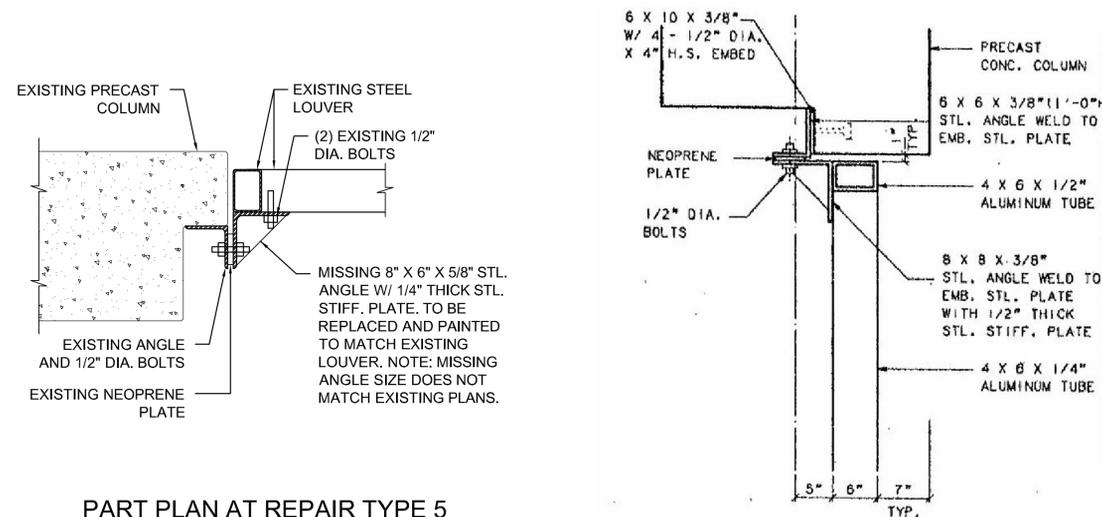
CRACK REPAIR NOTES

1. CONTRACTOR SHALL VERIFY LOCATION. IDENTIFIED REPAIRS ARE MARKED AS REPAIR TYPE 4.
2. CRACK IS TO BE REPAIRED USING SIKAFIX HH LV OR APPROVED EQUAL PER MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A WATERPROOFING TO THE EXISTING CRACK.



PHOTOGRAPH OF TYPICAL EXISTING CONDITION FOR REPAIR TYPE 4

REPAIR TYPE 4



PART PLAN AT REPAIR TYPE 5

5 LOUVER DETAIL PLAN SCALE: 1"=1'-0"

DETAIL FROM EXISTING PLANS

REPAIR TYPE 5



PHOTOGRAPH OF TYPICAL EXISTING CONDITION FOR REPAIR TYPE 5



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MISC. CONCRETE REPAIRS VRTC PARKING GARAGE 2016

REPAIR TYPE 3, 4, & 5

PROJECT NUMBER: 13-0493-013

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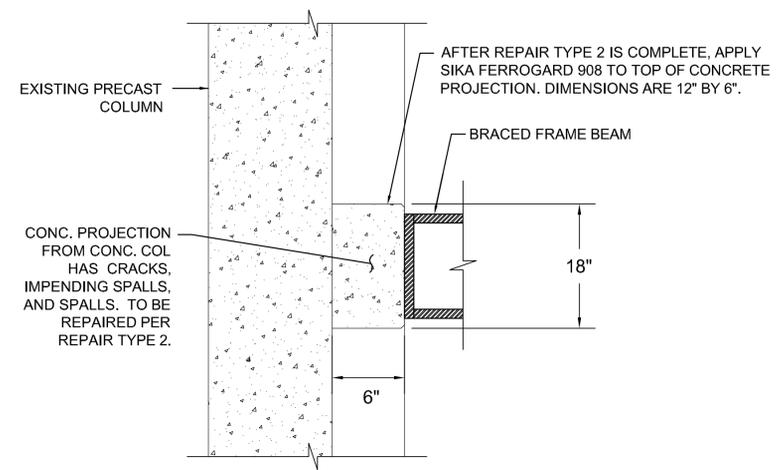
MISC. CONCRETE REPAIRS
VRTC PARKING GARAGE
2016

REPAIR TYPE 6 -
ADD ALTERNATE #1

PROJECT NUMBER: 13-0493-013

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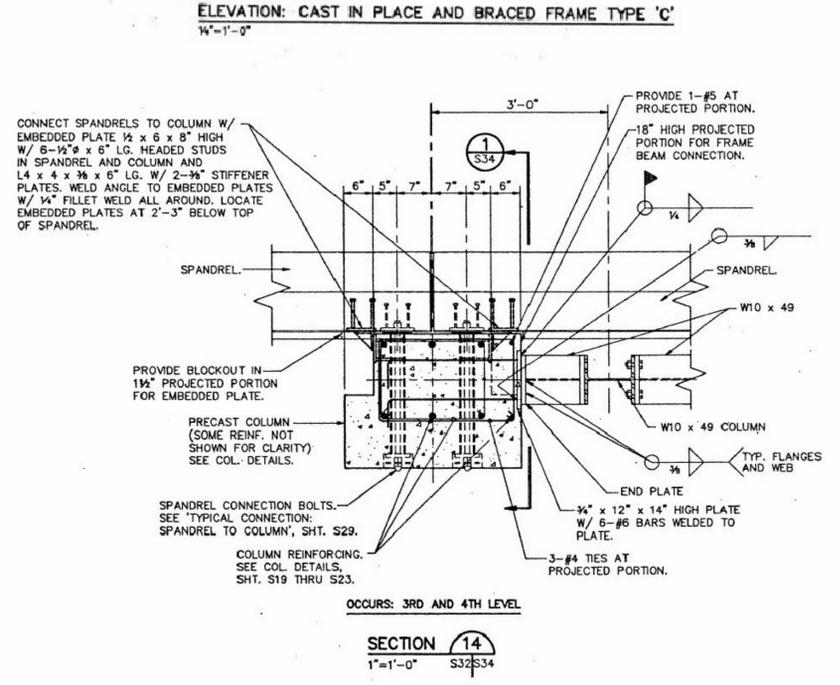
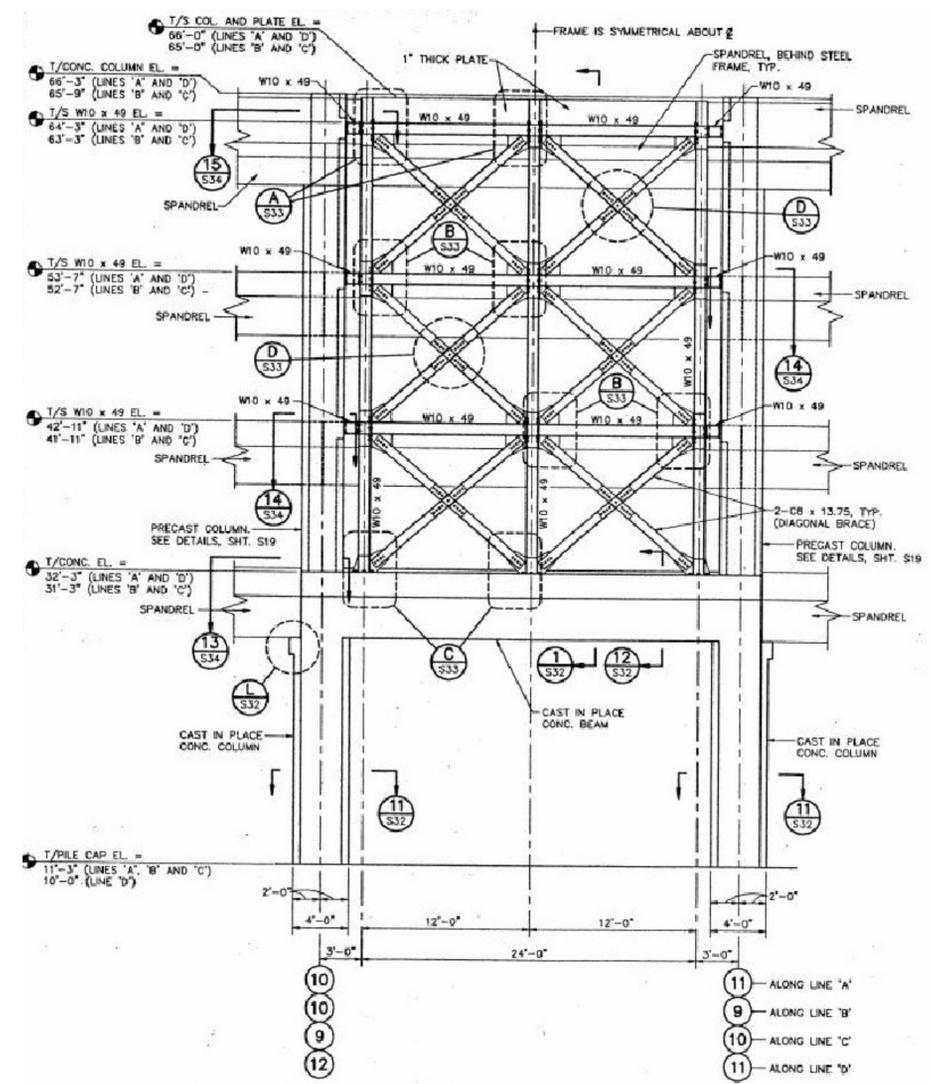
ELEVATION AT REPAIR TYPE 6

REPAIR NOTES

1. CONTRACTOR SHALL VERIFY LOCATION. IDENTIFIED REPAIRS ARE MARKED AS REPAIR TYPE 6.
2. REPAIR THE CRACKS, IMPENDING SPALLS, AND SPALLS IN THE CONCRETE PROJECTION OFF THE COLUMN PER REPAIR TYPE 2. SEE SHEET S-8.
3. WATERPROOFING AND CORROSION INHIBITOR IS TO BE APPLIED AFTER REPAIR TYPE 2 IS COMPLETE.
4. APPLY SIKA FERROGARD 908 OR APPROVED EQUAL PER MANUFACTURER'S RECOMMENDATIONS TO PROVIDE A WATERPROOFING AND CORROSION INHIBITOR TO THE CONCRETE COLUMN PROJECTION.



PHOTOGRAPH OF TYPICAL EXISTING
CONDITION FOR REPAIR TYPE 6



ELEVATION AND SECTION OF BRACED FRAME
FROM EXISTING PLANS FOR REFERENCE