

Serial Number: IFB FQ18064/GG
Date of Issue: April 13, 2018
IFB Due Date: May 23, 2018

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
600 FIFTH STREET, N.W.
WASHINGTON, D.C. 20001

May 3, 2018

AMENDMENT NO. 1
TO
INVITATION FOR BIDS
FOR
REHABILITATION OF 6 PARKING GARAGES – LARGO TOWN CENTER (NORTH), LARGO TOWN
CENTER (SOUTH), NEW CARROLTON, VIENNA (NORTH), WEST FALLS CHURCH AND WHITE
FLINT
FQ18064/GG

TO WHOM IT MAY CONCERN:

The Invitation for Bid for IFB FQ18064/GG requesting Bids for the above project is hereby changed in part as listed below.

1. Volume 1, Div 0 – Bidding and Contracting Requirements

Delete the following pages and in lieu thereof substitute the accompanying pages:

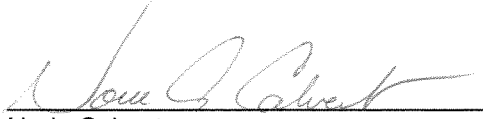
<u>DELETE</u>	<u>SUBSTITUTE</u>	<u>DESCRIPTION</u>
Section 00100 Notice to Bidders	Section 00100 Notice to Bidders	Revised
Section 00103 Project Bid Schedule	Section 00103 Project Bid Schedule	Revised
Section 00431 Bid Bond	Section 00431 Bid Bond	Revised
Section 00824 Project Schedule. Paragraphs F and G	Section 00824 Project Schedule. Paragraphs F and G	Revised

2. Volume 2 – IFB Drawings

<u>DELETE</u>	<u>SUBSTITUTE</u>	<u>DESCRIPTION</u>
A12-PP-101	A12-PP-101	Revised
D13-PP-101	D13-PP-101	Revised
D13-S-001	D13-S-001	Revised
K06-PP-101	K06-PP-101	Revised
K06-S-001	K06-S-001	Revised
K08-PP-101	K08-PP-101	Revised
K08-S-001	K08-S-001	Revised
K08-S-105	K08-S-105	Revised

3. Acknowledgment

Bidders are required to acknowledge receipt of this Amendment on Bid Form in the spaces provided. Failure to acknowledge all Amendments may cause the Bid to be considered non responsive to the IFB, which would require rejection of the Bid.



Norie Calvert
Contracting Officer
Office of Procurement

* * * * *

Section 00100 – Invitation for Bid

INVITATION FOR BID

This Section includes Project information for Bidders.

NOTICE TO BIDDERS

Contract No. FQ18064 includes IBF Documents for:

Project Name: REHABILITATION OF 6 PARKING GARAGES – LARGO TOWN CENTER (NORTH), LARGO TOWN CENTER (SOUTH), NEW CARROLTON, VIENNA (NORTH), WEST FALLS CHURCH AND WHITE FLINT

Bids for the Work described herein shall be submitted before 2:00 PM (Local time) on May 23, 2018.

AM 1

Questions may be directed to Guzel Gufranova, Contract Administrator, telephone: (202) 962-2467; email: ggufanova@wmata.com See Section 00200, Instructions For Bidders, for Bid submittal instructions.

DIRECTIONS TO SUBMITTING THE BID: Read and comply with the Invitation Instructions. In addition to other submission requirements set forth in this Invitation for Bid and all Amendments, the following must be properly executed, completed, and submitted as part of the Bid:

A. BID:

1. Bid Form (properly executed), Section 00413
2. Bid Price Schedule, Section 00434
3. Bid Security, Section 00431
4. Completed and signed Representations and Certifications, Section 00451
5. DBE Data, Section 00453
6. Compliance Information, Section 00432

BID(S) MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS INVITATION FOR BID, INCLUDING ALL AMENDMENTS.

00101 General Statement of Work

- A. The Contractor shall furnish all labor, materials, equipment, incidentals, and other items necessary to complete the Work as required by the Contract documents.
- B. The Project shall function as an integral part of and fully compatible with the existing WMATA system.
- C. It is the responsibility of the Contractor to gather all data necessary for the performance of the Work under this Contract that are needed in addition to Authority-furnished IFB Documents.
- D. Award of the contract will be based on the lowest responsive and responsible bid.
- E. All work under this Contract shall be performed in a logical sequence as developed by the Contractor and in compliance with this IFB.

00102 General Scope of Work

Parking Structure: Rehabilitate six parking garages , – Largo Town Center (North), Largo Town Center (South), New Carrollton, Vienna (North), West Falls Church and White Flint, to return them to a state of good repair.

The Work includes, but is not limited, to pre-cast rehab of the garages, for example: concrete repairs which include repair of cracks and spalls; double tee rehabilitation includes remove and replacement of deck sealant, repair of tee plates, cleaning and painting, etc. expansion joint rehab Work; deteriorated bearing pad replacement; traffic control; pressure washing; curbs and access ramps; application of sealant, re-striping of concrete surfaces; rehabilitation of exposed reinforced steel, installation of drainage slopes and additional surface drains; rehabilitated electrical circuits and lighting fixtures as necessary to meet current lighting code requirements; repair and coat steps in the stairwells; rehabilitating miscellaneous steel at ramp walls and in stairwells, connecting Bridge between Largo Town center north and South Parking Garage.

The Contractor will be working within 50 feet of right-of-way from Largo Town North and Largo Town South parking garages, railroad protective insurance will be required for these parking garages.

00103 Project Bid Schedule

The Bid schedule for this Project is as follows, with some dates being tentative:

- | | | |
|---------------------------------|---------------------------------------|-----|
| 1. Issue Invitation for Bid: | April 16, 2018 | |
| 2. Pre-Bid Conference: | April 26, 2018 at 11:00 AM Local Time | |
| 3. Site Visit | April 26, 2018 | |
| 4. Projected Bid Due/Opening: | May 23, 2018 | AM1 |
| 5. Projected Contract Award: | June 13, 2018 | AM1 |
| 6. Projected Notice to Proceed: | July 6, 2018 | AM1 |
| 7. Period of Performance: | NTP + 1290 Calendar Days | AM1 |

END OF SECTION

00431 Bid Security (Bid Bond Form)

(Submit with Bid)

This Section includes the Supplementary Bid Forms that are required to be submitted with the Bid.

BID BOND

Invitation for Bid No.: FQ18064

Bid Closing Date: May 23, 2018

AM1

Penal Sum of Bond: _____
Insert \$ or %

5% of Bid Price or Amount: _____
Insert Amount

Date Bond Executed: _____
Insert Date

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto, are firmly bond to the Washington Metropolitan Area Transit Authority in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally: provided, that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the Bid identified above:

NOW, THEREFORE, if the Principal, upon acceptance by the Authority of this Bid identified above, within the period specified therein for acceptance (60 Days if no period is specified), shall execute such further contractual documents, if any, and give such bond(s) as may be required by the terms of the Bid as accepted within the time specified 10 Days if no period is specified) after receipt of the forms by him, or in the event of failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the Authority for any cost of procuring the work which exceeds the amount of its Bid, then the above obligation shall be void and of not effect.

Each Surety executing this instrument hereby agrees that its obligation shall not be impaired by any extension(s) of the time for acceptance of the Bid that the Principal may grant to the Authority notice of which extension(s) to the Surety(ies) being hereby waived provided that such waiver shall apply only with respect to extensions aggregating not more than 60 Days in addition to the period originally allowed for acceptance of the Bid.

Principals

1. Firm Name:

Corporate Seal

Firm Address:

Title and Signature

State of Incorporation: _____

2. Firm Name:

Corporate Seal

Modify Clause 00724, Project Schedule to add the following paragraph and subparagraphs:

D. During cold and high ambient temperatures, the Contractor must protect the working area to maintain the temperature as specified in product data standards. The Contractor is not allowed to stop the work because of low or high temperature. In the case of high temperature during day time, contractor is allowed to work during the night with the prior arranged permission from WMATA COR.

D. WORK RESTRICTIONS

The Contractor shall not schedule any work activities on July 3rd, July 4th, and July 5th of each calendar year. In addition, the Contractor may be denied access on a particular work day because of an operational emergency which would not allow for an escort to be present on the work site; such as other duties required for severe weather conditions. Refer to the General Provisions for “damages for delay and time extensions”.

E. WORK UNDER THE BRIDGE

All rehab work at underside of connecting bridge (over the rail track) between Largo Town center North and South must be done during non-revenue hours of WMATA (during night hours) with prior approval of WMATA track services department.

F. INTERIM WORK COMPLETION

- a. Largo Town Center (North) parking garage – All work must be completed in 390 calendar days after Notice to Proceed issuance date.
- b. Largo Town Center (South) parking garage – All work must be completed in 900 calendar days after Notice to Proceed issuance date.
- c. Vienna (North) parking garage – All work must be completed in 540 calendar days after Notice to Proceed issuance date. **AM1**
- d. White Flint parking garage – All work must be completed in 930 calendar days after Notice to Proceed issuance date.
- e. West Falls Church parking garage – All work must be completed in 900 calendar days after Notice to Proceed issuance date. **AM1**
- f. New Carrollton Parking Garage– All work must be completed in 1260 calendar days after Notice to Proceed issuance date. **AM1**

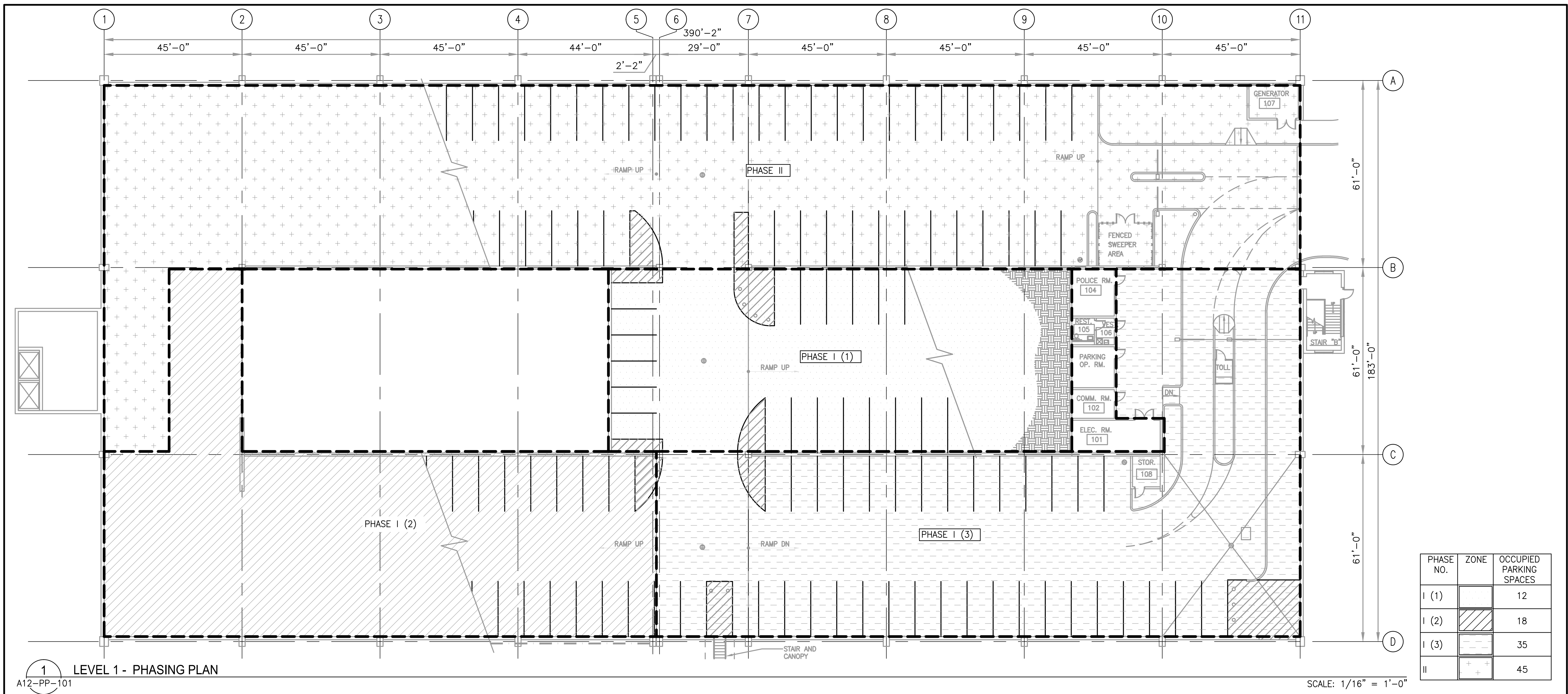
G. FINAL WORK COMPLETION

Final work completion for all six (6) parking facilities – maximum of 1290 calendar days after the initial Notice to Proceed issuance date. **AM1**

00825 Commencing the Work

Modify Clause 00725, Commencing the Work to delete Paragraph A. and substitute with the following Paragraph and subparagraphs:

- A. In the event the signed Contract with required insurance and bonds is not returned to the Authority within ten (10) calendar days after Date of award and, if approval has not been obtained within that ten



PHASE NO.	ZONE	OCCUPIED PARKING SPACES
I (1)		12
I (2)		18
I (3)		35
II		45

CONSTRUCTION PHASING NOTES:

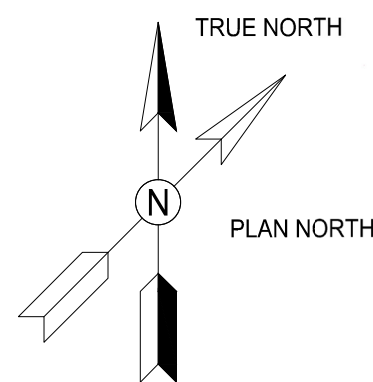
- ROMAN NUMERALS (I, II, III, IV, ETC.) INDICATE PHASING SEQUENCES.
- ARABIC NUMERALS SHOWN AS (1), (2), (3), (4), ETC. INDICATE CONSTRUCTION SEQUENCES WITHIN EACH PHASE.
- PHASING PLANS PROVIDED ARE CONCEPTUAL AND CONTRACTOR SHALL SUBMIT A FINAL CONSTRUCTION PHASING PLAN THAT WILL BE SUBJECT TO REVIEW AND APPROVAL BY AR. THE REVISED PHASING PLAN SHALL CLEARLY INDICATE THE SEQUENCE OF WORK, FLOW OF TRAFFIC AND NUMBER OF PARKING SPACES TAKEN OUT OF SERVICE DURING EACH PHASE OF THE REPAIR.
- PHASED WORK IN ALL ZONES SHALL PROGRESS FROM THE TOP LEVEL TO THE BOTTOM LEVEL.

- THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 200 SPACES AT A GIVEN TIME.
- TOTAL NO. OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
- EACH PHASE BEGINS WITH THE REHABILITATION OF STAIR TOWERS; ONLY ONE STAIR TOWER SHALL BE TAKEN OUT OF SERVICE AT A TIME.
- ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE WMATA SYSTEM IS SHUT DOWN AND SHOULD BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
- MAINTAIN AT LEAST TWO MEANS OF EGRESS AND ACCESS TO

ELEVATORS FROM EACH PARKING LEVEL AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIR AND ELEVATORS.

- CONTRACTOR TO PROVIDE A MINIMUM OF TWO WEEKS NOTICE PRIOR TO RELOCATION OF ALL HANDICAP PARKING SPACES. CONTRACTOR TO PROVIDE TEMPORARY SIGNS AS PER M.U.T.C.D. STANDARDS, BUT NO SIGN SHALL BE LESS THAN 2'-0" BY 2' -0" IN SIZE.
- PHASING BASED ON POTENTIAL NEED FOR SHORING TWO LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN THREE LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND TWO FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES. CONTRACTOR SHALL SUBMIT SHORING PLANS AND PROCEDURES.

- CONSTRUCTION HOURS OF WORK SHALL CONFORM TO CONSTRUCTION GENERAL PROVISIONS AND CONTRACTING REQUIREMENTS.





GFP A Gannett Fleming/Parsons JOINT VENTURE

STATE OF MARYLAND
DIPANKAR SENGUPTA
PROFESSIONAL ENGINEER
34339

"PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

LICENSE NO. 34339
EXPIRATION DATE: 06/17/2019

DESIGNED	K. TSE	01/2018	REFERENCE DRAWINGS		REVISIONS			<div>M metro</div> <div>WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY</div> <div>OFFICE OF DESIGN AND CONSTRUCTION</div> <div>IRPG - FIXED FACILITIES</div> <div><div>APPROVED</div><div></div><div>01/25/2018</div><div>DATE</div></div> <div><div>APPROVED</div><div></div><div>01/25/2018</div><div>DATE</div></div>	REHABILITATION OF PARKING GARAGES									
		DATE	NUMBER	TITLE	DATE	NUM	DESCRIPTION		A12 - WHITE FLINT - PARKING GARAGE									
	DRAWN	A. PINKOWSKI	01/2018			01/25/2018	0		FINAL SUBMITTAL	M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.				
			DATE			04/30/2018	1		AMENDMENT # 1						M1301			
	CHECKED	D. SENGUPTA	01/2018												FQ18064	1/16"=1'-0"	A12-PP-101	03 of 503
			DATE															

CONSTRUCTION PHASING NOTES:

1. ROMAN NUMERALS (I, II, III, IV, ETC.) INDICATE PHASING SEQUENCES.
2. ARABIC NUMERALS SHOWN AS (1), (2), (3), (4), ETC. INDICATE CONSTRUCTION SEQUENCES WITHIN EACH PHASE.
3. PHASING PLANS PROVIDED ARE CONCEPTUAL AND CONTRACTOR SHALL SUBMIT A FINAL CONSTRUCTION PHASING PLAN THAT WILL BE SUBJECT TO REVIEW AND APPROVAL BY AR. THE REVISED PHASING PLAN SHALL CLEARLY INDICATE THE SEQUENCE OF WORK, FLOW OF TRAFFIC AND NUMBER OF PARKING SPACES TAKEN OUT OF SERVICE DURING EACH PHASE OF THE REPAIR.
4. PHASED WORK IN ALL ZONES SHALL PROGRESS FROM THE TOP LEVEL TO THE BOTTOM LEVEL.
5. THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 350 SPACES AT A GIVEN TIME.
6. TOTAL NO. OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
7. EACH PHASE BEGINS WITH THE REHABILITATION OF STAIR TOWERS; ONLY ONE STAIR TOWER SHALL BE TAKEN OUT OF SERVICE AT A TIME.
8. ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE WMATA SYSTEM IS SHUT DOWN AND SHOULD BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
9. MAINTAIN AT LEAST TWO MEANS OF EGRESS AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIR AND ELEVATORS.
10. CONTRACTOR TO PROVIDE A MINIMUM OF TWO WEEKS NOTICE PRIOR TO RELOCATION OF ALL HANDICAP PARKING SPACES. CONTRACTOR TO PROVIDE TEMPORARY SIGNS AS PER M.U.T.C.D. STANDARDS, BUT NO SIGN SHALL BE LESS THAN 2'-0" BY 2'-0" IN SIZE.
11. PHASING BASED ON POTENTIAL NEED FOR SHORING TWO LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN THREE LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND TWO FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES. CONTRACTOR SHALL SUBMIT SHORING PLANS AND PROCEDURES.
12. CONSTRUCTION HOURS OF WORK SHALL CONFORM TO CONSTRUCTION GENERAL PROVISIONS IN VOLUME 1 - BIDDING AND CONTRACTING REQUIREMENTS.

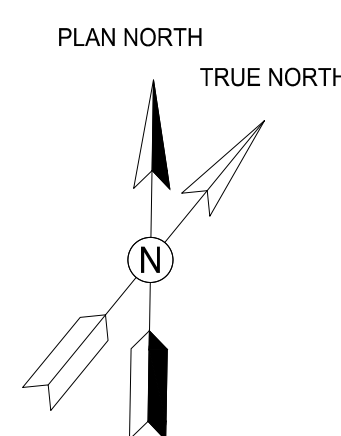
PHASE NO.	ZONE	OCCUPIED PARKING SPACES
I		62
II		71
III		66

GFP A Gannett Fleming/Parsons
JOINT VENTURE

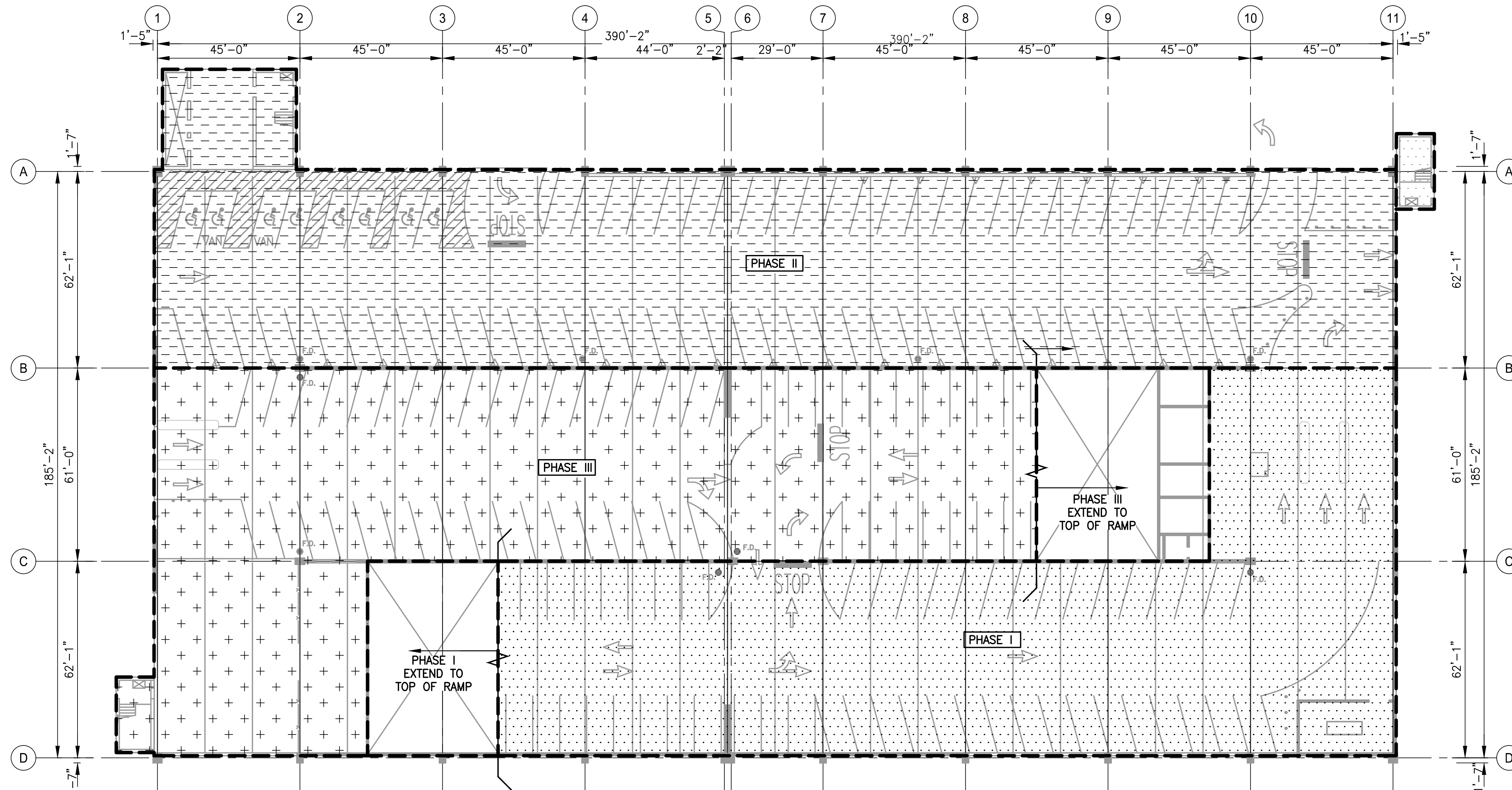
"PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND."

LICENSE No. 42582
EXPIRATION DATE: 08/13/2018

- COMAR 09.23.03.10



SCALE: 1/20" = 1'-0"



1 LEVEL 1 - PHASING PLAN
D13-PP-101



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF DESIGN AND CONSTRUCTION
IRPG - FIXED FACILITIESAPPROVED
JOHN PURDY
ENGINEERING MANAGER01/25/2018
DATEAPPROVED
IFTEKHAR AHMAD
ENGINEER OF RECORD01/25/2018
DATEM NO.
M1301CONTRACT NO.
FQ18064SCALE
1/20" = 1'-0"DRAWING NO.
D13-PP-101SHEET NO.
82 of 503REHABILITATION OF PARKING GARAGES
D13 - NEW CARROLLTON PARKING GARAGE
LEVEL 1
PHASING PLAN

DESIGNED B. TCHOUDJA 01/2018
DATE
DRAWN L. NGUYEN 01/2018
DATE
CHECKED L. KATSMAN 01/2018
DATE

REFERENCE DRAWINGS

NUMBER	TITLE

REVISIONS

DATE	NUM	DESCRIPTION
01/25/2018	0	FINAL SUBMITTAL
04/30/2018	1	AMENDMENT #1

GENERAL STRUCTURAL NOTES

CODES AND STANDARDS:

1. THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS (USE THE LATEST EDITIONS UNLESS NOTED OTHERWISE):
 - 1.1 2015 INTERNATIONAL BUILDING CODE.
 - 1.2 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES": ASCE 7-10, AMERICAN SOCIETY OF CIVIL ENGINEERS.
 - 1.3 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)", AMERICAN CONCRETE INSTITUTE.
 - 1.4 "OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION" (OSHA) SECTION 1926
 - 1.5 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" 2015.

STRUCTURAL CONSTRUCTION NOTES

1. ALL EXISTING DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2. STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH SPECIFICATIONS, AND OTHER DISCIPLINES DRAWINGS DURING ALL PHASES OF CONSTRUCTION. DISCREPANCIES BETWEEN ENGINEERING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL MAINTAIN SAFEGUARDS NECESSARY TO PROTECT PERSONS AND PROPERTY FROM INJURY OR DAMAGE DURING THE PERFORMANCE OF THE WORK. OSHA, STATE, COUNTY AND MUNICIPAL CODES SHALL BE FOLLOWED.
4. THE PARKING FACILITY SHALL REMAIN IN SERVICE DURING THE ENTIRE PROJECT CONSTRUCTION EXECUTION. MAINTAIN AT LEAST TWO MEANS OF EMERGENCY AND EGRESS EXITS, ROUTES AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL DURING THE PROJECT CONSTRUCTION EXECUTION. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIRS AND ELEVATORS.
5. STAGING AREAS ARE TO BE KEPT CLEAN OF DEBRIS AND DIRT ON A DAILY BASIS, CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE AND CLEANING OF THESE AREAS DURING THE COURSE OF THE PROJECT.
6. CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPED AREAS IN THE VICINITY WHERE WORK IS TO BE PERFORMED.
7. INFORMATION IN SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE TYPICAL FOR THE ENTIRE PROJECT AND SHALL BE CONSIDERED TYPICAL FOR SIMILAR SITUATIONS NOT SHOWN.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO PRODUCING SHOP DRAWINGS, FABRICATING COMPONENTS, OR ORDERING MATERIALS. ALL SHOP DRAWINGS SHALL SHOW DIMENSIONS FIELD VERIFIED BY THE CONTRACTOR.
9. THE QUANTITIES OF DETERIORATION SHOWN ON THE BID SCHEDULE ARE APPROXIMATE AND CAN VARY IN THE FIELD. ACTUAL FIELD CONDITIONS MAY WARRANT MODIFICATIONS TO THE CONSTRUCTION DETAILS. AREAS OF NEW DETERIORATION THAT HAVE OCCURRED AFTER THE COMPLETION OF THE CONDITION SURVEY INSPECTION ARE ALSO TO BE EXPECTED. THE CONTRACTOR SHALL SOUND ALL CONCRETE SURFACES AND MARK ALL AREAS OF CONCRETE DETERIORATION IN NEED OF REPAIR. THE LAYOUT SHALL BE VERIFIED AND APPROVED BY THE ENGINEER OF RECORD.
10. ALL INFORMATION SHOWN ON DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS. NO MATERIAL TESTING WAS PERFORMED.
11. CONTRACTOR SHALL SUBMIT SHORING PLANS WITH PROCEDURE AND SHOP DRAWING FOR APPROVAL PRIOR TO CONSTRUCTION. SEE SHORING DETAIL ON DRAWING S-510. PHASING BASED ON POTENTIAL NEED FOR SHORING THREE LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN FOUR LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND THREE FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES.
12. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE TO CONDUITS THAT RESULT FROM THE SCOPE OF WORK.
13. CONTRACTOR SHALL PROVIDE TRAFFIC SIGNAGE DURING CONSTRUCTION AS PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ISSUED BY THE FEDERAL HIGHWAY ADMINISTRATION.
14. THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 350 SPACES AT A GIVEN TIME. PROVIDE TWO WEEKS ADVANCE NOTICE ON ALL 350 PARKING SPACES BEFORE TAKING PARKING SPACES FOR REHABILITATION.
15. TOTAL NUMBER OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
16. CONTRACTOR SHALL PROVIDE DEBRIS FALL PROTECTION BENEATH THE EXPANSION JOINT DURING REPLACEMENT ACTIVITIES.

17. CONTRACTOR SHALL PROVIDE TWO WEEKS NOTICE PRIOR REMOVAL AND RELOCATION OF HANDICAPPED PARKING SPACES AND SIGNS DUE TO CONSTRUCTION. MINIMUM SIZE OF SIGNS AS PER INTERNATIONAL BUILDING CODE-2015 SHALL BE NO LESS THAN 2'-0" BY 2'-0" IN SIZE.
18. PROVIDE 28"x36" COROPLAST OR EQUIVALENT SIGN AT SIX LOCATIONS ON EACH GARAGE PER WMATA APPROVED LOCATION. THE SIGN SHALL STATE DURATION OF PROJECT AT START DATE AND GENERAL NOTICE IN ENGLISH AND SPANISH.
19. ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE GARAGE IS SHUT DOWN AND SHALL BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
20. CONSTRUCTION PHASING SHALL OCCUR ONE LEVEL AT A TIME CONSECUTIVELY, BEGINNING WITH TOP TIER AND ENDING WITH GROUND LEVEL. CONTRACTOR SHALL NOT BEGIN WORK ANY ADDITIONAL PHASES WITHOUT APPROVAL OF COMPLETING WORK IN A PREVIOUS PHASE.
21. CONTRACTOR MUST PROVIDE THE RIGHT OF WAY CLEARANCES TO PUBLIC DURING CONSTRUCTION PHASES ON LEVELS.

CONCRETE NOTES

1. ALL CONCRETE/MORTAR REPAIRS ARE TO INCLUDE AN EPOXY BONDING AGENT UNLESS INDICATED OTHERWISE. BONDING AGENT SHALL BE APPLIED TO ALL CONCRETE/MORTAR REPAIR AREAS PRIOR TO THE APPLICATION OF REPAIR MATERIALS, UNLESS NOTED OTHERWISE.
2. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. UNLESS NOTED OTHERWISE, BARS AT SPLICES ARE TO BE LAPPED IN ACCORDANCE WITH THE TABLE "MINIMUM REINFORCEMENT LAP SPLICES AND EMBEDMENTS" AS FOLLOWS:

REINFORCING STEEL LAP SPLICES AND EMBEDMENTS								
BAR SIZE	MINIMUM LAP SPLICE LENGTH (INCHES)				MINIMUM EMBEDMENT LENGTH (INCHES)			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
CLEAR COVER	< 2"	≥ 2"	< 2"	≥ 2"	< 2"	≥ 2"	< 2"	≥ 2"
3	14	14	12	12	12	12	12	12
4	19	19	14	14	14	14	12	12
5	27	23	21	18	21	18	16	14
6	38	28	29	21	29	21	22	17
7	61	40	47	31	47	31	36	24
8	76	46	59	35	59	35	45	27
9	93	57	71	44	71	44	55	34
10	112	70	87	54	87	54	67	42
11	133	84	102	65	102	65	79	50

NOTES:

- TABLE BASED ON ACI 318-14 WITH $f'_c = 5,000$ PSI AND $f_y = 60,000$ PSI.
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THE REINFORCEMENT.
- HORIZONTAL WALL REINFORCEMENT IS CONSIDERED A TOP BAR.
- CLEAR COVER = CONCRETE COVER FOR REINFORCEMENT BARS.
- FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.2.
- FOR $f'_c=4,000$ PSI, MULTIPLY THE TABULATED VALUES BY 1.1.

5. CONCRETE COVER FOR REINFORCEMENT BARS SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE ON DRAWINGS:
- | | |
|---|--------------|
| a. UNFORMED SURFACES IN CONTACT WITH GROUND | 3 INCHES |
| b. FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER AND ALL WALLS | 2 INCHES |
| c. COLUMNS AND BEAMS | 1 1/2 INCHES |
| d. EXTERIOR EXPOSURE, TOP OF SLABS | 1 1/2 INCHES |

6. CHAMFER EXPOSED CONCRETE EDGES TO MATCH EXISTING.
7. DRILLED HOLES FOR EPOXY ANCHORED DOWELS/ANCHORS SHALL BE 1/8 INCH LARGER IN DIAMETER THAN DOWEL/ANCHOR DIAMETER.

STEEL NOTES



1. ALL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO A992 GALVANIZED STEEL. ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36 GALVANIZED UNLESS NOTED OTHERWISE.
2. ANCHORS SHALL BE GALVANIZED OR STAINLESS STEEL EXPANSION ANCHORS OR APPROVED EQUAL AS SHOWN ON DRAWINGS.
3. WELDING SHALL BE COMPLY WITH THE LATEST AWS 1.1 CODE. E70XX ELECTRODES SHALL BE USED FOR ALL WELDS.

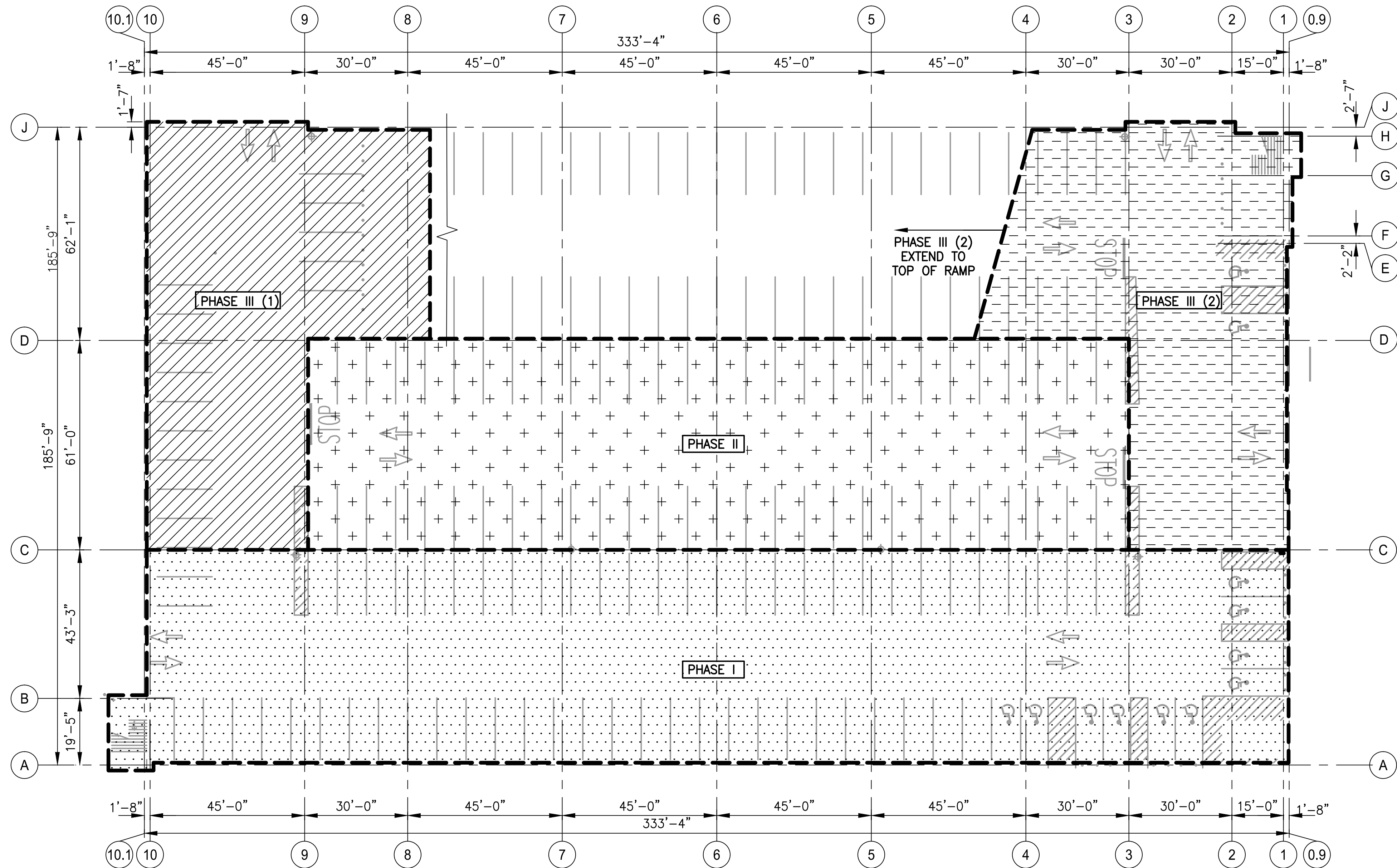
CONCRETE REPAIR NOTES:

1. THE LOCATION AND EXTENT OF EACH TYPE OF REPAIR IS SHOWN ON THE DRAWINGS. THE C.M. AND THE CONTRACTOR SHALL JOINTLY INSPECT EACH ITEM TO BE REPAIRED. THE CONTRACTOR SHALL QUANTIFY ANY ADDITIONAL REPAIRS AND GET APPROVAL FROM THE C.M. PRIOR TO THE START OF REPAIR WORK.
2. CONCRETE REPAIRS SHALL BE COMPLETED IN THE FOLLOWING ORDER: SPALL REPAIRS, CRACK REPAIR BY EPOXY INJECTION AND APPLICATION OF PROTECTIVE COATINGS.
3. PATCHING SHALL NOT BE PERFORMED AT ANY LOCATION UNTIL THE C.M. HAS APPROVED THE FOLLOWING:
 - (a) THE SURFACES TO RECEIVE PATCHING MATERIAL.
 - (b) THE REINFORCEMENT, INCLUDING ADEQUATE CONCRETE REMOVAL, ADEQUATE REINFORCEMENT STEEL AND ADEQUATE REINFORCEMENT STEEL SUPPORT AND COVER. JUST PRIOR TO PATCHING, CLEAN SURFACES TO BE PATCHED OF ALL MATERIAL WHICH IS NOT SOUND CONCRETE OR REBAR, AND SATURATE WITH WATER TO PRODUCE A SURFACE-SATURATED DRY CONDITION (WITH NO STANDING WATER) DURING APPLICATION.

REMOVAL NOTES:

1. REMOVE OR DEMOLISHED MATERIALS SHALL NOT BE ALLOWED TO FALL, DROP OR IMPACT AGAINST THE STRUCTURE TO REMAIN.
2. AREAS DAMAGED BY REMOVALS / DEMOLITION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OF RECORD.

DESIGNED <u>M. PARK</u> 01/2018 DATE			REFERENCE DRAWINGS		REVISIONS			 WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY OFFICE OF DESIGN AND CONSTRUCTION IRPG - FIXED FACILITIES		REHABILITATION OF PARKING GARAGES D13 - NEW CARROLLTON PARKING GARAGE GENERAL STRUCTURAL NOTES				
DRAWN <u>L. NGUYEN</u> 01/2018 DATE			NUMBER	TITLE	DATE	NUM	DESCRIPTION							
CHECKED <u>L. KATSMAN</u> 01/2018 DATE					01/25/2018	0	FINAL SUBMITTAL	 APPROVED 01/25/2018 JOHN PURDY ENGINEERING MANAGER	 APPROVED 01/25/2018 IFTEKHAR AHMAD ENGINEER OF RECORD	M NO. M1301	CONTRACT NO. FQ18064	SCALE NONE	DRAWING NO. D13-S-001	SHEET NO. 86 of 503
					04/30/2018	1	AMENDMENT #1							



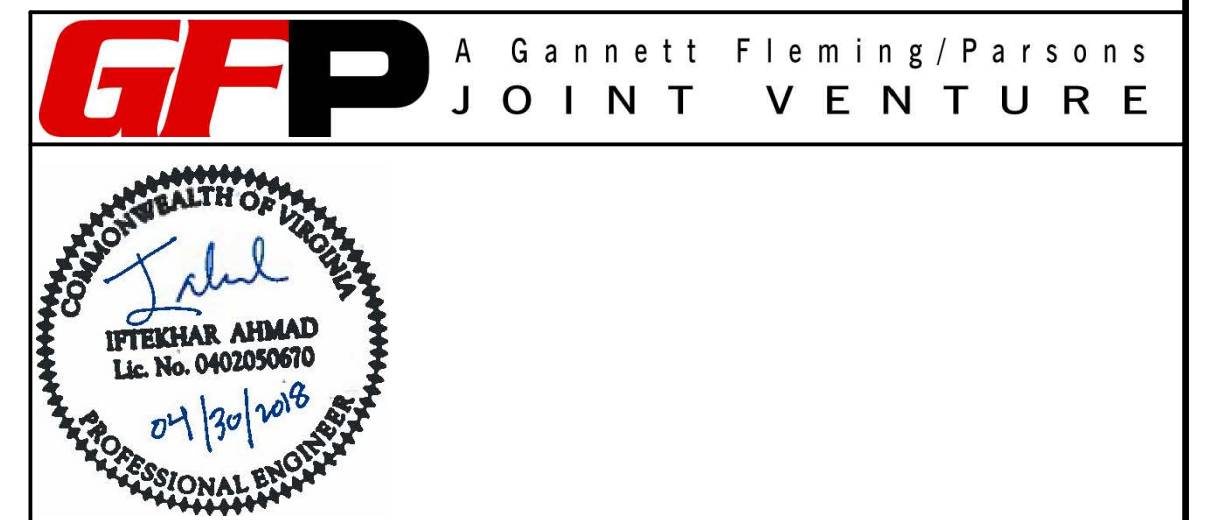
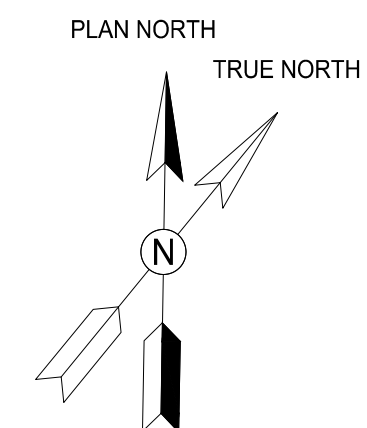
1 LEVEL 1 - PHASING PLAN
K06-PP-101

1/20" = 1'-0"

CONSTRUCTION PHASING NOTES:

1. ROMAN NUMERALS (I, II, III, IV, ETC.) INDICATE PHASING SEQUENCES.
2. ARABIC NUMERALS SHOWN AS (1), (2), (3), (4), ETC. INDICATE CONSTRUCTION SEQUENCES WITHIN EACH PHASE.
3. PHASING PLANS PROVIDED ARE CONCEPTUAL AND CONTRACTOR SHALL SUBMIT A FINAL CONSTRUCTION PHASING PLAN THAT WILL BE SUBJECT TO REVIEW AND APPROVAL BY AR. THE REVISED PHASING PLAN SHALL CLEARLY INDICATE THE SEQUENCE OF WORK, FLOW OF TRAFFIC AND NUMBER OF PARKING SPACES TAKEN OUT OF SERVICE DURING EACH PHASE OF THE REPAIR.
4. PHASED WORK IN ALL ZONES SHALL PROGRESS FROM THE TOP LEVEL TO THE BOTTOM LEVEL.
5. THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 625 SPACES AT A GIVEN TIME.
6. TOTAL NO. OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
7. EACH PHASE BEGINS WITH THE REHABILITATION OF STAIR TOWERS; ONLY ONE STAIR TOWER SHALL BE TAKEN OUT OF SERVICE AT A TIME.
8. ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE WMATA SYSTEM IS SHUT DOWN AND SHOULD BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
9. MAINTAIN AT LEAST TWO MEANS OF EGRESS AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIR AND ELEVATORS.
10. CONTRACTOR TO PROVIDE A MINIMUM OF TWO WEEKS NOTICE PRIOR TO RELOCATION OF ALL HANDICAP PARKING SPACES. CONTRACTOR TO PROVIDE TEMPORARY SIGNS AS PER M.U.T.C.D. STANDARDS, BUT NO SIGN SHALL BE LESS THAN 2'-0" BY 2'-0" IN SIZE.
11. PHASING BASED ON POTENTIAL NEED FOR SHORING TWO LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN THREE LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND TWO FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES. CONTRACTOR SHALL SUBMIT SHORING PLANS AND PROCEDURES.
12. CONSTRUCTION HOURS OF WORK SHALL CONFORM TO CONSTRUCTION GENERAL PROVISIONS IN VOLUME 1 - BIDDING AND CONTRACTING REQUIREMENTS.

PHASE NO.	ZONE	OCCUPIED PARKING SPACES
I		68
II	+	56
III (1)		16
III (2)		58



DESIGNED

B. TCHOUDJA

01/2018

DATE

DRAWN

L. NGUYEN

01/2018

DATE

CHECKED

L. KATSMAN

01/2018

DATE

REFERENCE DRAWINGS		REVISIONS		
NUMBER	TITLE	DATE	NUM	DESCRIPTION
		01/25/2018	0	FINAL SUBMITTAL
		04/30/2018	1	AMENDMENT #1

M
metro

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF DESIGN AND CONSTRUCTION

IRPG - FIXED FACILITIES

APPROVED

JOHN PURDY

ENGINEERING MANAGER

01/25/2018

DATE

APPROVED

IFTEKHAR AHMAD

ENGINEER OF RECORD

01/25/2018

DATE

REHABILITATION OF PARKING GARAGES
K06 - WEST FALLS CHURCH PARKING GARAGE
LEVEL 1
PHASING PLAN

M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
M1301	FQ18064	1/20" = 1'-0"	K06-PP-101	310 of 503

GENERAL STRUCTURAL NOTES

CODES AND STANDARDS:

1.

THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS (USE THE LATEST EDITIONS UNLESS NOTED OHERWISE):
- 1.1

2015 INTERNATIONAL BUILDING CODE.
- 1.2

"MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES": ASCE 7–10, AMERICAN SOCIETY OF CIVIL ENGINEERS.
- 1.3

"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318–14)", AMERICAN CONCRETE INSTITUTE.
- 1.4

"OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION" (OSHA) SECTION 1926
- 1.5

"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" 2015.

STRUCTURAL CONSTRUCTION NOTES

1.

ALL EXISTING DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2.

STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH SPECIFICATIONS, AND OTHER DISCIPLINES DRAWINGS DURING ALL PHASES OF CONSTRUCTION. DISCREPANCIES BETWEEN ENGINEERING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING WORK.
3.

CONTRACTOR SHALL MAINTAIN SAFEGUARDS NECESSARY TO PROTECT PERSONS AND PROPERTY FROM INJURY OR DAMAGE DURING THE PERFORMANCE OF THE WORK. OSHA, STATE, COUNTY AND MUNICIPAL CODES SHALL BE FOLLOWED.
4.

THE PARKING FACILITY SHALL REMAIN IN SERVICE DURING THE ENTIRE PROJECT CONSTRUCTION EXECUTION. MAINTAIN AT LEAST TWO MEANS OF EMERGENCY AND EGRESS EXITS, ROUTES AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL DURING THE PROJECT CONSTRUCTION EXECUTION. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIRS AND ELEVATORS.
5.

STAGING AREAS ARE TO BE KEPT CLEAN OF DEBRIS AND DIRT ON A DAILY BASIS, CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE AND CLEANING OF THESE AREAS DURING THE COURSE OF THE PROJECT.
6.

CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPED AREAS IN THE VICINITY WHERE WORK IS TO BE PERFORMED.
7.

INFORMATION IN SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE TYPICAL FOR THE ENTIRE PROJECT AND SHALL BE CONSIDERED TYPICAL FOR SIMILAR SITUATIONS NOT SHOWN.
8.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO PRODUCING SHOP DRAWINGS, FABRICATING COMPONENTS, OR ORDERING MATERIALS. ALL SHOP DRAWINGS SHALL SHOW DIMENSIONS FIELD VERIFIED BY THE CONTRACTOR.
9.

THE QUANTITIES OF DETERIORATION SHOWN ON THE BID SCHEDULE ARE APPROXIMATE AND CAN VARY IN THE FIELD. ACTUAL FIELD CONDITIONS MAY WARRANT MODIFICATIONS TO THE CONSTRUCTION DETAILS. AREAS OF NEW DETERIORATION THAT HAVE OCCURRED AFTER THE COMPLETION OF THE CONDITION SURVEY INSPECTION ARE ALSO TO BE EXPECTED. THE CONTRACTOR SHALL SOUND ALL CONCRETE SURFACES AND MARK ALL AREAS OF CONCRETE DETERIORATION IN NEED OF REPAIR. THE LAYOUT SHALL BE VERIFIED AND APPROVED BY THE ENGINEER OF RECORD.
10.

ALL INFORMATION SHOWN ON DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS. NO MATERIAL TESTING WAS PERFORMED.
11.

CONTRACTOR SHALL SUBMIT SHORING PLANS WITH PROCEDURE AND SHOP DRAWING FOR APPROVAL PRIOR TO CONSTRUCTION. SEE SHORING DETAIL ON DRAWING S–510. PHASING BASED ON POTENTIAL NEED FOR SHORING THREE LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN FOUR LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND THREE FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES.
12.

CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE TO CONDUITS THAT RESULT FROM THE SCOPE OF WORK.
13.

CONTRACTOR SHALL PROVIDE TRAFFIC SIGNAGE DURING CONSTRUCTION AS PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ISSUED BY THE FEDERAL HIGHWAY ADMINISTRATION.
14.

THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 625 SPACES AT A GIVEN TIME. PROVIDE TWO WEEKS ADVANCE NOTICE ON ALL 625 PARKING SPACES BEFORE TAKING PARKING SPACES FOR REHABILITATION.
15.

TOTAL NUMBER OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
16.

CONTRACTOR SHALL PROVIDE DEBRIS FALL PROTECTION BENEATH THE EXPANSION JOINT DURING REPLACEMENT ACTIVITIES.

17.

CONTRACTOR SHALL PROVIDE TWO WEEKS NOTICE PRIOR REMOVAL AND RELOCATION OF HANDICAPPED PARKING SPACES AND SIGNS DUE TO CONSTRUCTION. MINIMUM SIZE OF SIGNS AS PER INTERNATIONAL BUILDING CODE–2015 SHALL BE NO LESS THAN 2’–0” BY 2’–0” IN SIZE.
18.

PROVIDE 28”X36” COROPLAST OR EQUIVALENT SIGN AT SIX LOCATIONS ON EACH GARAGE PER WMATA APPROVED LOCATION. THE SIGN SHALL STATE DURATION OF PROJECT AT START DATE AND GENERAL NOTICE IN ENGLISH AND SPANISH.
19.

ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE GARAGE IS SHUT DOWN AND SHALL BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
20.

CONSTRUCTION PHASING SHALL OCCUR ONE LEVEL AT A TIME CONSECUTIVELY, BEGINNING WITH TOP TIER AND ENDING WITH GROUND LEVEL. CONTRACTOR SHALL NOT BEGIN WORK ANY ADDITIONAL PHASES WITHOUT APPROVAL OF COMPLETING WORK IN A PREVIOUS PHASE.
21.

CONTRACTOR MUST PROVIDE THE RIGHT OF WAY CLEARANCES TO PUBLIC DURING CONSTRUCTION PHASES ON LEVELS.

CONCRETE NOTES

1.

ALL CONCRETE/MORTAR REPAIRS ARE TO INCLUDE AN EPOXY BONDING AGENT UNLESS INDICATED OTHERWISE. BONDING AGENT SHALL BE APPLIED TO ALL CONCRETE/MORTAR REPAIR AREAS PRIOR TO THE APPLICATION OF REPAIR MATERIALS, UNLESS NOTED OTHERWISE.
2.

STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
3.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4.

UNLESS NOTED OTHERWISE, BARS AT SPLICES ARE TO BE LAPPED IN ACCORDANCE WITH THE TABLE "MINIMUM REINFORCEMENT LAP SPLICES AND EMBEDMENTS" AS FOLLOWS:

REINFORCING STEEL LAP SPLICES AND EMBEDMENTS								
BAR SIZE	MINIMUM LAP SPlice LENGTH (INCHES)				MINIMUM EMBEDMENT LENGTH (INCHES)			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
CLEAR COVER	< 2”	≥ 2”	< 2”	≥ 2”	< 2”	≥ 2”	< 2”	≥ 2”
3	14	14	12	12	12	12	12	12
4	19	19	14	14	14	14	12	12
5	27	23	21	18	21	18	16	14
6	38	28	29	21	29	21	22	17
7	61	40	47	31	47	31	36	24
8	76	46	59	35	59	35	45	27
9	93	57	71	44	71	44	55	34
10	112	70	87	54	87	54	67	42
11	133	84	102	65	102	65	79	50
<div>NOTES:</div> <div><div>1.</div><div>TABLE BASED ON ACI 318–14 WITH f’c = 5,000 PSI AND f’y = 60,000 PSI.</div></div> <div><div>2.</div><div>TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12” DEPTH OF CONCRETE CAST BELOW THE REINFORCEMENT.</div></div> <div><div>3.</div><div>HORIZONTAL WALL REINFORCEMENT IS CONSIDERED A TOP BAR.</div></div> <div><div>4.</div><div>CLEAR COVER = CONCRETE COVER FOR REINFORCEMENT BARS.</div></div> <div><div>5.</div><div>FOR EPOXY–COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.2.</div></div> <div><div>6.</div><div>FOR f’c=4,000 PSI, MULTIPLY THE TABULATED VALUES BY 1.1.</div></div>								

5.

CONCRETE COVER FOR REINFORCEMENT BARS SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE ON DRAWINGS:
- a.

UNFORMED SURFACES IN CONTACT WITH GROUND

3 INCHES
- b.

FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER AND ALL WALLS

2 INCHES
- c.

COLUMNS AND BEAMS

1 1/2 INCHES
- d.

EXTERIOR EXPOSURE, TOP OF SLABS

1 1/2 INCHES

6.

CHAMFER EXPOSED CONCRETE EDGES TO MATCH EXISTING.
7.

DRILLED HOLES FOR EPOXY ANCHORED DOWELS/ANCHORS SHALL BE 1/8 INCH LARGER IN DIAMETER THAN DOWEL/ANCHOR DIAMETER.

STEEL NOTES

1.

ALL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO A992 GALVANIZED STEEL. ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36 GALVANIZED UNLESS NOTED OTHERWISE.
2.

ANCHORS SHALL BE GALVANIZED OR STAINLESS STEEL EXPANSION ANCHORS OR APPROVED EQUAL AS SHOWN ON DRAWINGS.
3.

WELDING SHALL BE COMPLY WITH THE LATEST AWS 1.1 CODE. E70XX ELECTRODES SHALL BE USED FOR ALL WELDS.

CONCRETE REPAIR NOTES:

1.

THE LOCATION AND EXTENT OF EACH TYPE OF REPAIR IS SHOWN ON THE DRAWINGS. THE C.M. AND THE CONTRACTOR SHALL JOINTLY INSPECT EACH ITEM TO BE REPAIRED. THE CONTRACTOR SHALL QUANTIFY ANY ADDITIONAL REPAIRS AND GET APPROVAL FROM THE C.M. PRIOR TO THE START OF REPAIR WORK.
2.

CONCRETE REPAIRS SHALL BE COMPLETED IN THE FOLLOWING ORDER: SPALL REPAIRS, CRACK REPAIR BY EPOXY INJECTION AND APPLICATION OF PROTECTIVE COATINGS.
3.

PATCHING SHALL NOT BE PERFORMED AT ANY LOCATION UNTIL THE C.M. HAS APPROVED THE FOLLOWING:

(a)

THE SURFACES TO RECEIVE PATCHING MATERIAL.

(b)

THE REINFORCEMENT, INCLUDING ADEQUATE CONCRETE REMOVAL, ADEQUATE REINFORCEMENT STEEL AND ADEQUATE REINFORCEMENT STEEL SUPPORT AND COVER. JUST PRIOR TO PATCHING, CLEAN SURFACES TO BE PATCHED OF ALL MATERIAL WHICH IS NOT SOUND CONCRETE OR REBAR, AND SATURATE WITH WATER TO PRODUCE A SURFACE–SATURATED DRY CONDITION (WITH NO STANDING WATER) DURING APPLICATION.

REMOVAL NOTES:

1.

REMOVE OR DEMOLISHED MATERIALS SHALL NOT BE ALLOWED TO FALL, DROP OR IMPACT AGAINST THE STRUCTURE TO REMAIN.
2.

AREAS DAMAGED BY REMOVALS / DEMOLITION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OF RECORD.

1

DESIGNED	M. PARK	01/2018 DATE	REFERENCE DRAWINGS		REVISIONS			WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY				REHABILITATION OF PARKING GARAGES K06 - WEST FALLS CHURCH PARKING GARAGE GENERAL STRUCTURAL NOTES			
			NUMBER	TITLE	DATE	NUM	DESCRIPTION								
DRAWN	L. NGUYEN	01/2018 DATE			01/25/2018	0	FINAL SUBMITTAL	OFFICE OF DESIGN AND CONSTRUCTION IRPG - FIXED FACILITIES				M NO.	CONTRACT NO.	SCALE	DRAWING NO.
					04/30/2018	1	AMENDMENT #1								
CHECKED	L. KATSMAN	01/2018 DATE						APPROVED JOHN PURDY ENGINEERING MANAGER	01/25/2018 DATE	APPROVED IFTEKHAR AHMAD ENGINEER OF RECORD	01/25/2018 DATE	M1301	FQ18064	NONE	K06-S-001

GFP

A Gannett Fleming/Parsons
JOINT VENTURE

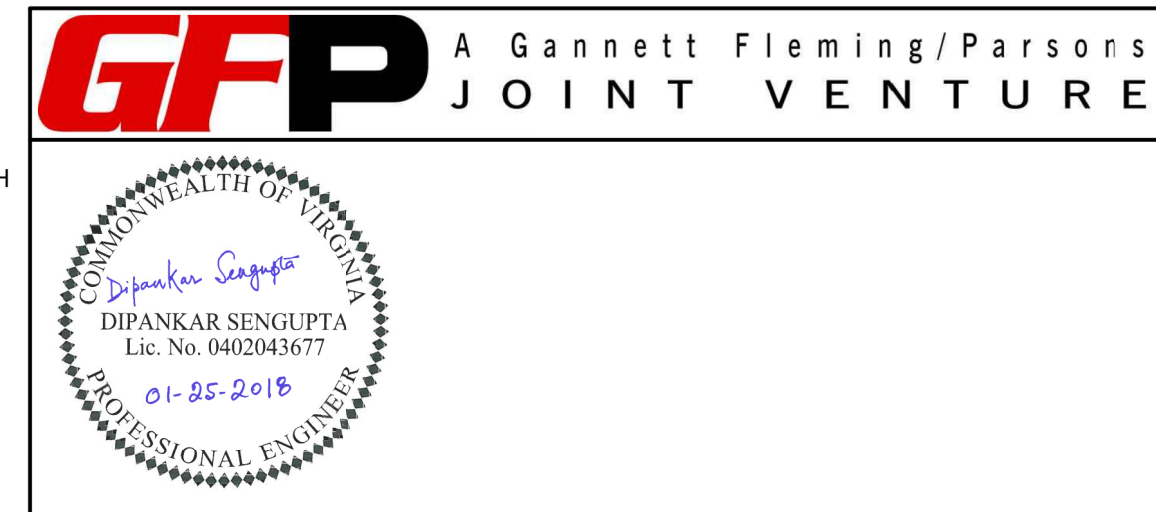
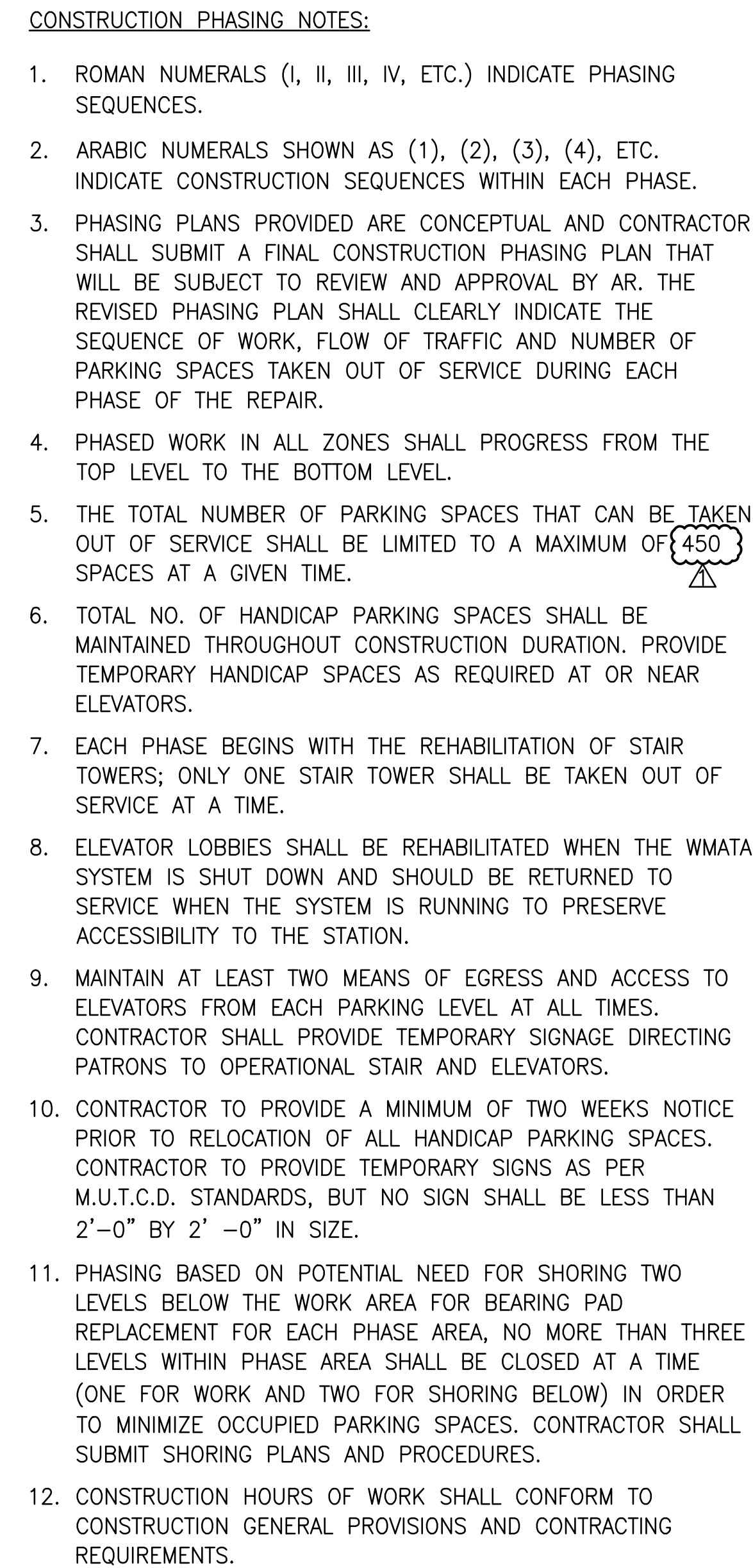
COMMONWEALTH OF VIRGINIA

Ishel

IFTEKHAR AHMAD
Lic. No. 0402050670

04/30/2018

PROFESSIONAL ENGINEER

[illegible]

GENERAL STRUCTURAL NOTES

CODES AND STANDARDS:

1. THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS (USE THE LATEST EDITIONS UNLESS NOTED OHERWISE):
- 1.12015 INTERNATIONAL BUILDING CODE.

1.2"MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES": ASCE 7–10, AMERICAN SOCIETY OF CIVIL ENGINEERS.

1.3"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318–14)", AMERICAN CONCRETE INSTITUTE.

1.4"OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION" (OSHA) SECTION 1926

1.5"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" 2015.

STRUCTURAL CONSTRUCTION NOTES

1. ALL EXISTING DIMENSIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2. STRUCTURAL DRAWINGS MUST BE USED IN CONJUNCTION WITH SPECIFICATIONS, AND OTHER DISCIPLINES DRAWINGS DURING ALL PHASES OF CONSTRUCTION. DISCREPANCIES BETWEEN ENGINEERING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL MAINTAIN SAFEGUARDS NECESSARY TO PROTECT PERSONS AND PROPERTY FROM INJURY OR DAMAGE DURING THE PERFORMANCE OF THE WORK. OSHA, STATE, COUNTY AND MUNICIPAL CODES SHALL BE FOLLOWED.
4. THE PARKING FACILITY SHALL REMAIN IN SERVICE DURING THE ENTIRE PROJECT CONSTRUCTION EXECUTION. MAINTAIN AT LEAST TWO MEANS OF EMERGENCY AND EGRESS EXITS, ROUTES AND ACCESS TO ELEVATORS FROM EACH PARKING LEVEL DURING THE PROJECT CONSTRUCTION EXECUTION. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE DIRECTING PATRONS TO OPERATIONAL STAIRS AND ELEVATORS.
5. STAGING AREAS ARE TO BE KEPT CLEAN OF DEBRIS AND DIRT ON A DAILY BASIS, CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE AND CLEANING OF THESE AREAS DURING THE COURSE OF THE PROJECT.
6. CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPED AREAS IN THE VICINITY WHERE WORK IS TO BE PERFORMED.
7. INFORMATION IN SECTIONS AND DETAILS SHOWN ON DRAWINGS ARE TYPICAL FOR THE ENTIRE PROJECT AND SHALL BE CONSIDERED TYPICAL FOR SIMILAR SITUATIONS NOT SHOWN.
8. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO PRODUCING SHOP DRAWINGS, FABRICATING COMPONENTS, OR ORDERING MATERIALS. ALL SHOP DRAWINGS SHALL SHOW DIMENSIONS FIELD VERIFIED BY THE CONTRACTOR.
9. THE QUANTITIES OF DETERIORATION SHOWN ON THE BID SCHEDULE ARE APPROXIMATE AND CAN VARY IN THE FIELD. ACTUAL FIELD CONDITIONS MAY WARRANT MODIFICATIONS TO THE CONSTRUCTION DETAILS. AREAS OF NEW DETERIORATION THAT HAVE OCCURRED AFTER THE COMPLETION OF THE CONDITION SURVEY INSPECTION ARE ALSO TO BE EXPECTED. THE CONTRACTOR SHALL SOUND ALL CONCRETE SURFACES AND MARK ALL AREAS OF CONCRETE DETERIORATION IN NEED OF REPAIR. THE LAYOUT SHALL BE VERIFIED AND APPROVED BY THE ENGINEER OF RECORD.
10. ALL INFORMATION SHOWN ON DRAWINGS HAVE BEEN PREPARED BASED ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS. NO MATERIAL TESTING WAS PERFORMED.
11. CONTRACTOR SHALL SUBMIT SHORING PLANS WITH PROCEDURE AND SHOP DRAWING FOR APPROVAL PRIOR TO CONSTRUCTION. SEE SHORING DETAIL ON DRAWING S–510. PHASING BASED ON POTENTIAL NEED FOR SHORING THREE LEVELS BELOW THE WORK AREA FOR BEARING PAD REPLACEMENT FOR EACH PHASE AREA, NO MORE THAN FOUR LEVELS WITHIN PHASE AREA SHALL BE CLOSED AT A TIME (ONE FOR WORK AND THREE FOR SHORING BELOW) IN ORDER TO MINIMIZE OCCUPIED PARKING SPACES.
12. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE TO CONDUITS THAT RESULT FROM THE SCOPE OF WORK.
13. CONTRACTOR SHALL PROVIDE TRAFFIC SIGNAGE DURING CONSTRUCTION AS PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ISSUED BY THE FEDERAL HIGHWAY ADMINISTRATION.
14. THE TOTAL NUMBER OF PARKING SPACES THAT CAN BE TAKEN OUT OF SERVICE SHALL BE LIMITED TO A MAXIMUM OF 450 SPACES AT A GIVEN TIME. PROVIDE TWO WEEKS ADVANCE NOTICE ON ALL 450 PARKING SPACES BEFORE TAKING PARKING SPACES FOR REHABILITATION.
15. TOTAL NUMBER OF HANDICAP PARKING SPACES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION DURATION. PROVIDE TEMPORARY HANDICAP SPACES AS REQUIRED AT OR NEAR ELEVATORS.
16. CONTRACTOR SHALL PROVIDE DEBRIS FALL PROTECTION BENEATH THE EXPANSION JOINT DURING REPLACEMENT ACTIVITIES.

17. CONTRACTOR SHALL PROVIDE TWO WEEKS NOTICE PRIOR REMOVAL AND RELOCATION OF HANDICAPPED PARKING SPACES AND SIGNS DUE TO CONSTRUCTION. MINIMUM SIZE OF SIGNS AS PER INTERNATIONAL BUILDING CODE–2015 SHALL BE NO LESS THAN 2’–0” BY 2’–0” IN SIZE.
18. PROVIDE 28”X36” COROPLAST OR EQUIVALENT SIGN AT SIX LOCATIONS ON EACH GARAGE PER WMATA APPROVED LOCATION. THE SIGN SHALL STATE DURATION OF PROJECT AT START DATE AND GENERAL NOTICE IN ENGLISH AND SPANISH.
19. ELEVATOR LOBBIES SHALL BE REHABILITATED WHEN THE GARAGE IS SHUT DOWN AND SHALL BE RETURNED TO SERVICE WHEN THE SYSTEM IS RUNNING TO PRESERVE ACCESSIBILITY TO THE STATION.
20. CONSTRUCTION PHASING SHALL OCCUR ONE LEVEL AT A TIME CONSECUTIVELY, BEGINNING WITH TOP TIER AND ENDING WITH GROUND LEVEL. CONTRACTOR SHALL NOT BEGIN WORK ANY ADDITIONAL PHASES WITHOUT APPROVAL OF COMPLETING WORK IN A PREVIOUS PHASE.
21. CONTRACTOR MUST PROVIDE THE RIGHT OF WAY CLEARANCES TO PUBLIC DURING CONSTRUCTION PHASES ON LEVELS.

CONCRETE NOTES

1. ALL CONCRETE/MORTAR REPAIRS ARE TO INCLUDE AN EPOXY BONDING AGENT UNLESS INDICATED OTHERWISE. BONDING AGENT SHALL BE APPLIED TO ALL CONCRETE/MORTAR REPAIR AREAS PRIOR TO THE APPLICATION OF REPAIR MATERIALS, UNLESS NOTED OTHERWISE.
2. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. UNLESS NOTED OTHERWISE, BARS AT SPLICES ARE TO BE LAPPED IN ACCORDANCE WITH THE TABLE "MINIMUM REINFORCEMENT LAP SPLICES AND EMBEDMENTS" AS FOLLOWS:

REINFORCING STEEL LAP SPLICES AND EMBEDMENTS								
BAR SIZE	MINIMUM LAP SPlice LENGTH (INCHES)				MINIMUM EMBEDMENT LENGTH (INCHES)			
	TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
CLEAR COVER	< 2”	≥ 2”	< 2”	≥ 2”	< 2”	≥ 2”	< 2”	≥ 2”
3	14	14	12	12	12	12	12	12
4	19	19	14	14	14	14	12	12
5	27	23	21	18	21	18	16	14
6	38	28	29	21	29	21	22	17
7	61	40	47	31	47	31	36	24
8	76	46	59	35	59	35	45	27
9	93	57	71	44	71	44	55	34
10	112	70	87	54	87	54	67	42
11	133	84	102	65	102	65	79	50
<div>NOTES:</div> <div>1. TABLE BASED ON ACI 318–14 WITH f’c = 5,000 PSI AND f’y = 60,000 PSI.</div> <div>2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12” DEPTH OF CONCRETE CAST BELOW THE REINFORCEMENT.</div> <div>3. HORIZONTAL WALL REINFORCEMENT IS CONSIDERED A TOP BAR.</div> <div>4. CLEAR COVER = CONCRETE COVER FOR REINFORCEMENT BARS.</div> <div>5. FOR EPOXY–COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.2.</div> <div>6. FOR f’c=4,000 PSI, MULTIPLY THE TABULATED VALUES BY 1.1.</div>								

5. CONCRETE COVER FOR REINFORCEMENT BARS SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE ON DRAWINGS:
- a. UNFORMED SURFACES IN CONTACT WITH GROUND

3 INCHES

b. FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER AND ALL WALLS

2 INCHES

c. COLUMNS AND BEAMS

1 1/2 INCHES

d. EXTERIOR EXPOSURE, TOP OF SLABS

1 1/2 INCHES

6. CHAMFER EXPOSED CONCRETE EDGES TO MATCH EXISTING.
7. DRILLED HOLES FOR EPOXY ANCHORED DOWELS/ANCHORS SHALL BE 1/8 INCH LARGER IN DIAMETER THAN DOWEL/ANCHOR DIAMETER.

STEEL NOTES

1. ALL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO A992 GALVANIZED STEEL. ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36 GALVANIZED UNLESS NOTED OTHERWISE.
2. ANCHORS SHALL BE GALVANIZED OR STAINLESS STEEL EXPANSION ANCHORS OR APPROVED EQUAL AS SHOWN ON DRAWINGS.
3. WELDING SHALL BE COMPLY WITH THE LATEST AWS 1.1 CODE. E70XX ELECTRODES SHALL BE USED FOR ALL WELDS.

CONCRETE REPAIR NOTES:

1. THE LOCATION AND EXTENT OF EACH TYPE OF REPAIR IS SHOWN ON THE DRAWINGS. THE C.M. AND THE CONTRACTOR SHALL JOINTLY INSPECT EACH ITEM TO BE REPAIRED. THE CONTRACTOR SHALL QUANTIFY ANY ADDITIONAL REPAIRS AND GET APPROVAL FROM THE C.M. PRIOR TO THE START OF REPAIR WORK.
2. CONCRETE REPAIRS SHALL BE COMPLETED IN THE FOLLOWING ORDER: SPALL REPAIRS, CRACK REPAIR BY EPOXY INJECTION AND APPLICATION OF PROTECTIVE COATINGS.
3. PATCHING SHALL NOT BE PERFORMED AT ANY LOCATION UNTIL THE C.M. HAS APPROVED THE FOLLOWING:

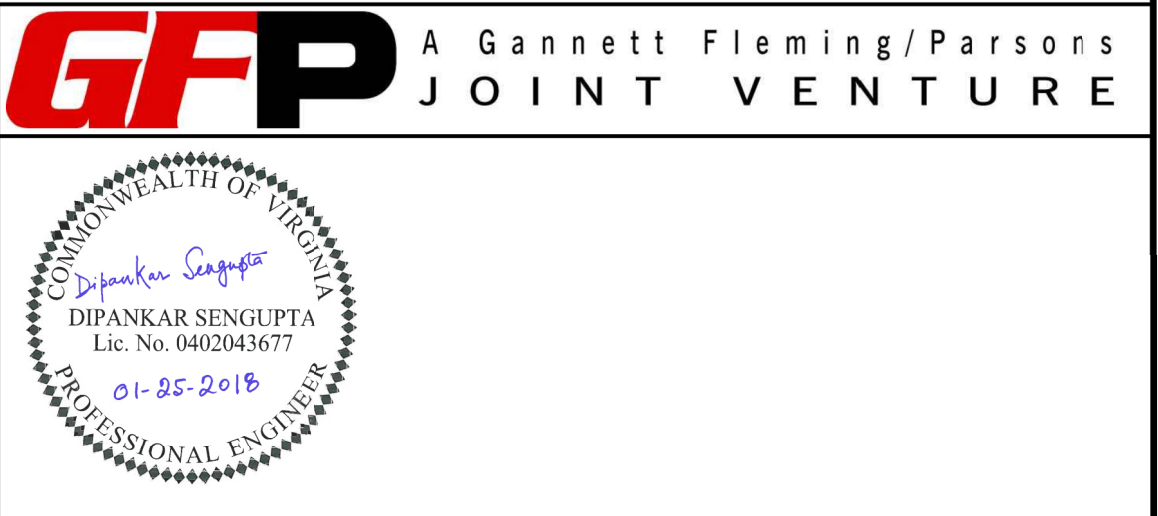
(a) THE SURFACES TO RECEIVE PATCHING MATERIAL.

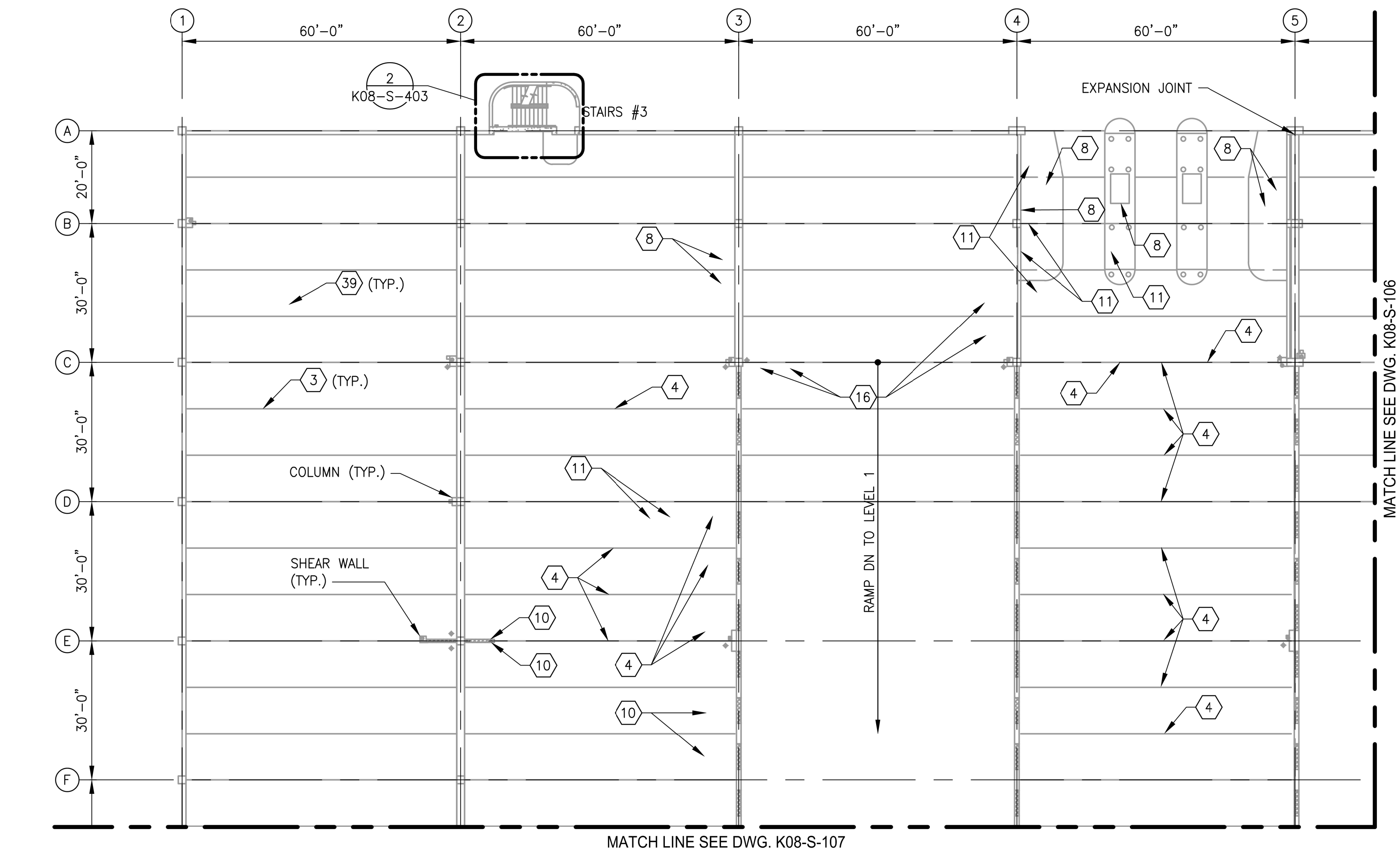
(b) THE REINFORCEMENT, INCLUDING ADEQUATE CONCRETE REMOVAL, ADEQUATE REINFORCEMENT STEEL AND ADEQUATE REINFORCEMENT STEEL SUPPORT AND COVER. JUST PRIOR TO PATCHING, CLEAN SURFACES TO BE PATCHED OF ALL MATERIAL WHICH IS NOT SOUND CONCRETE OR REBAR, AND SATURATE WITH WATER TO PRODUCE A SURFACE–SATURATED DRY CONDITION (WITH NO STANDING WATER) DURING APPLICATION.

REMOVAL NOTES:

1. REMOVE OR DEMOLISHED MATERIALS SHALL NOT BE ALLOWED TO FALL, DROP OR IMPACT AGAINST THE STRUCTURE TO REMAIN.
2. AREAS DAMAGED BY REMOVALS / DEMOLITION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OF RECORD.

DESIGNED <u>K. TSE</u> 01/2018 DATE			REFERENCE DRAWINGS			REVISIONS			<div><div>Mmetro</div><div>WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY</div><div>OFFICE OF THE CHIEF OPERATING OFFICER</div><div>IRPG - FIXED FACILITIES</div><div><div>APPROVED <u>John Purdy</u> 01/25/2018 JOHN PURDY ENGINEERING MANAGER</div><div>DATE</div><div>APPROVED <u>Dipankar Sengupta</u> 01/25/2018 DIPANKAR SENGUPTA ENGINEER OF RECORD</div><div>DATE</div></div></div>	REHABILITATION OF PARKING GARAGES K08 - VIENNA STATION - NORTH PARKING GARAGE				
DRAWN <u>A. PINKOWSKI</u> 01/2018 DATE			NUMBER	TITLE	DATE	NUM	DESCRIPTION							
CHECKED <u>D. SENGUPTA</u> 01/2018 DATE					01/25/2018	0	FINAL SUBMITTAL							
					04/30/2018	1	AMENDMENT # 1							
											GENERAL STRUCTURAL NOTES			
									M NO.		CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
									M1301		FQ18064	NONE	K08-S-001	385 of 503





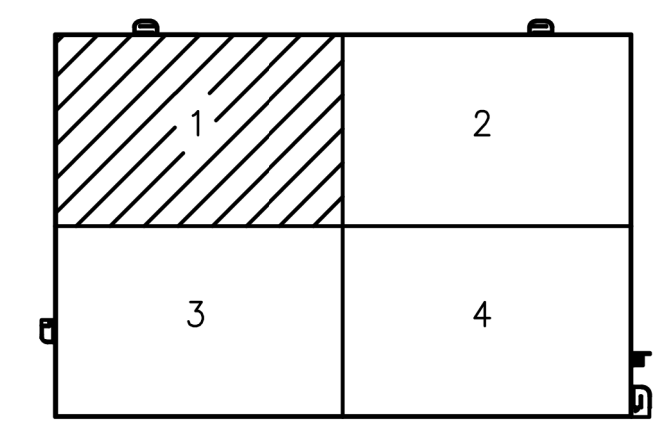
1 LEVEL 2 - PARTIAL FLOOR PLAN 1
K08-S-105

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

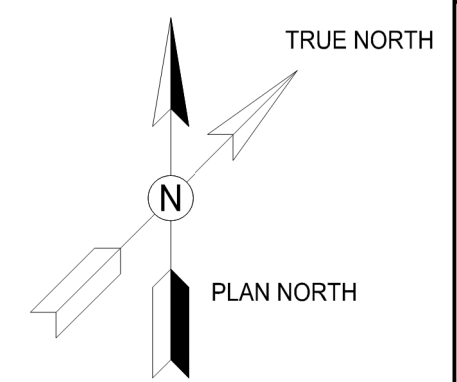
- NOTES:
- SEE DRAWING K08-S-002 FOR THE LIST OF KEY NOTES.
 - SILANE COATING SHALL BE PROVIDED FOR ENTIRE PARKING AREA.

STRUCTURAL REPAIR QUANTITIES (LEVEL 2)			
KEY NOTES	QUANTITY	UNIT OF QTY.	NUMBER OF LOCATIONS
1	9	LF	1
3 *	14400	LF	240
4	385	SF	32
8	204	LF	17
9	42	LF	7
10	122	SF	16
11	70	SF	11
16	15	SF	1
19	39	SF	5
26	84	SF	2
30	3520	SF	2
39	142800	SF	1

* ALL EXISTING DOUBLE TEE BEAM JOINTS SHALL BE REPLACED WITH NEW JOINT.



KEY PLAN



GFP A Gannett Fleming/Parsons
JOINT VENTURE

DIPANKAR SENGUPTA
Lic. No. 0402043677
01-25-2018
PROFESSIONAL ENGINEER

DESIGNED <u>K. TSE</u> 01/2018 DATE	REFERENCE DRAWINGS	REVISIONS	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY	REHABILITATION OF PARKING GARAGES K08 - VIENNA STATION - NORTH PARKING GARAGE LEVEL 2 PARTIAL FLOOR PLAN 1								
DRAWN <u>A. PINKOWSKI</u> 01/2018 DATE	NUMBER	TITLE	DATE	NUM	DESCRIPTION							
CHECKED <u>D. SENGUPTA</u> 01/2018 DATE			01/25/2018	0	FINAL SUBMITTAL	OFFICE OF THE CHIEF OPERATING OFFICER IRPG - FIXED FACILITIES						
			04/30/2018	1	AMENDMENT # 1							
						APPROVED 01/25/2018 DATE	APPROVED 01/25/2018 DATE	M NO. M1301	CONTRACT NO. FQ18064	SCALE 1/16"=1'-0"	DRAWING NO. K08-S-105	SHEET NO. 391 of 503