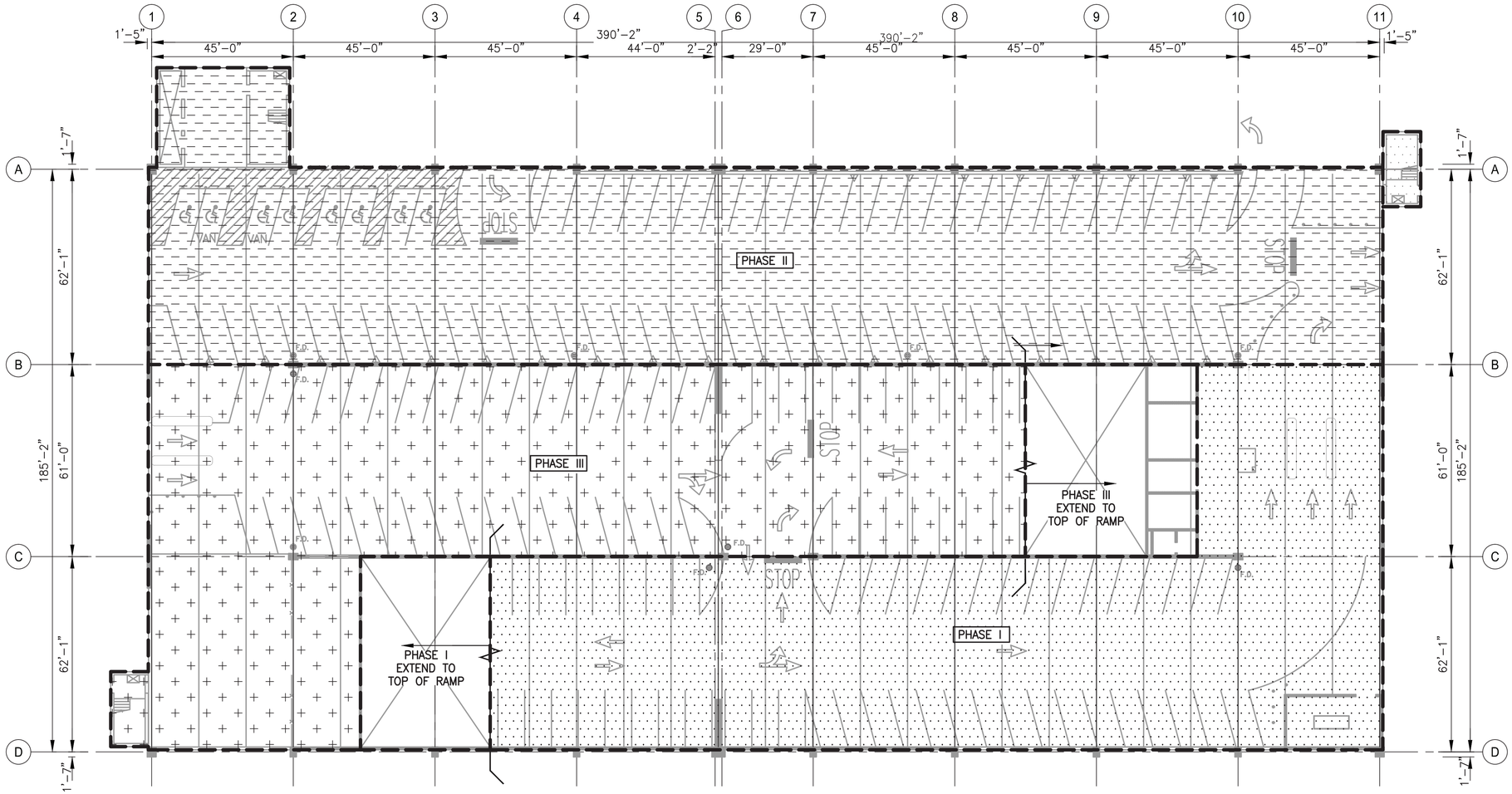


1 LEVEL 1 - PHASING PLAN
D13–PP–101

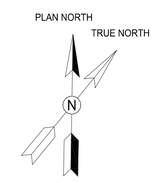
SCALE: 1/20" = 1'–0"

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 350 SPACES AT A GIVEN TIME. 1
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

2



GFP A Gannett Fleming/Parsons JOINT VENTURE

STATE OF MARYLAND IFTEKHAR AHMAD No. 42582 PROFESSIONAL ENGINEER

"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

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
05/15/2018	2	AMENDMENT #2

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF DESIGN AND CONSTRUCTION
IRPG - FIXED FACILITIES

APPROVED 01/25/2018 DATE
JOHN PURDY
ENGINEERING MANAGER

APPROVED 01/25/2018 DATE
IFTEKHAR AHMAD
ENGINEER OF RECORD

REHABILITATION OF PARKING GARAGES
D13 - NEW CARROLLTON PARKING GARAGE
LEVEL 1
PHASING PLAN

M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
M1301	FQ18064	1/20" = 1'-0"	D13-PP-101	82 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 A.R. FOR CLARIFICATION BEFORE COMMENCING WORK. 2

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 A.R. 2

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. 1

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:

1. TABLE BASED ON ACI 318–14 WITH f'c = 5,000 PSI AND f'y = 60,000 PSI.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THE REINFORCEMENT.
3. HORIZONTAL WALL REINFORCEMENT IS CONSIDERED A TOP BAR.
4. CLEAR COVER = CONCRETE COVER FOR REINFORCEMENT BARS.
5. FOR EPOXY–COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.2.
6. 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: 2

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

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 A.R. HAS APPROVED THE FOLLOWING: 2

   (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.

2

GFP A Gannett Fleming/Parsons JOINT VENTURE

STATE OF MARYLAND — IFTEKHAR AHMAD — No. 42582 — PROFESSIONAL ENGINEER

"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

DESIGNED	M. PARK	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
05/07/2018	2	AMENDMENT #2

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF DESIGN AND CONSTRUCTION
IRPG - FIXED FACILITIES

APPROVED 01/25/2018 DATE
JOHN PURDY
ENGINEERING MANAGER

APPROVED 01/25/2018 DATE
IFTEKHAR AHMAD
ENGINEER OF RECORD

REHABILITATION OF PARKING GARAGES
D13 - NEW CARROLLTON PARKING GARAGE
GENERAL STRUCTURAL NOTES

M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
M1301	FQ18064	NONE	D13-S-001	86 of 503