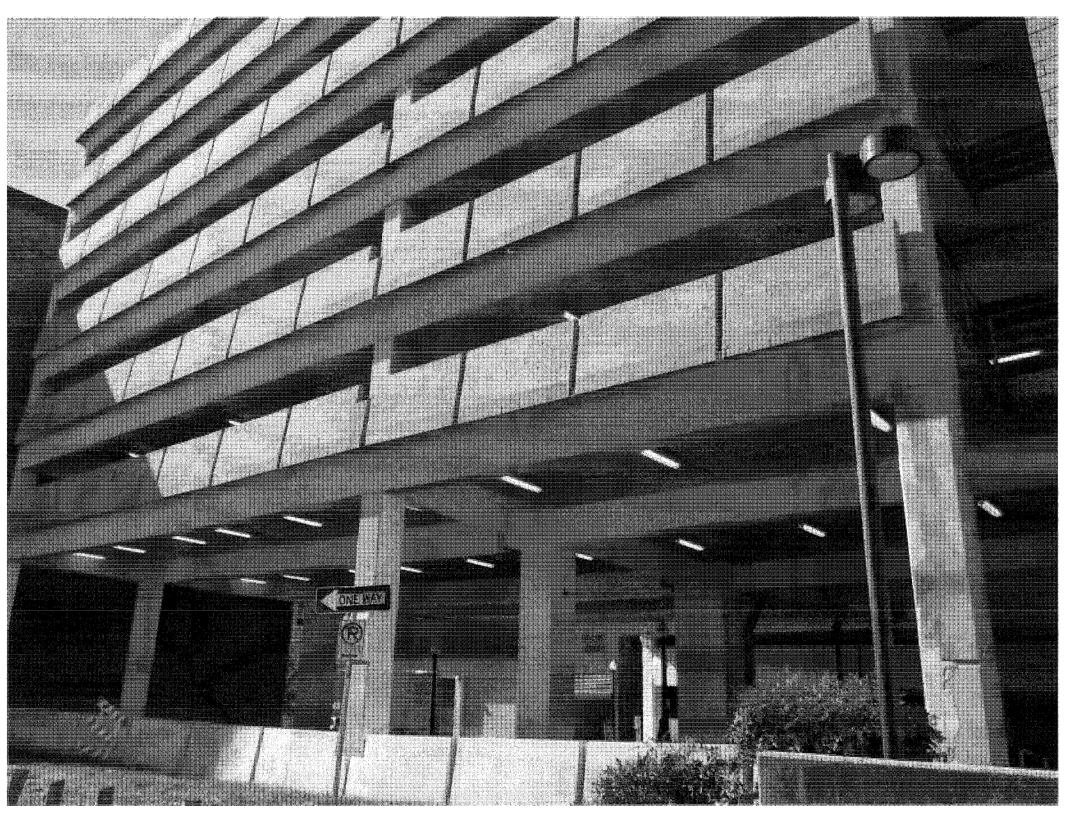
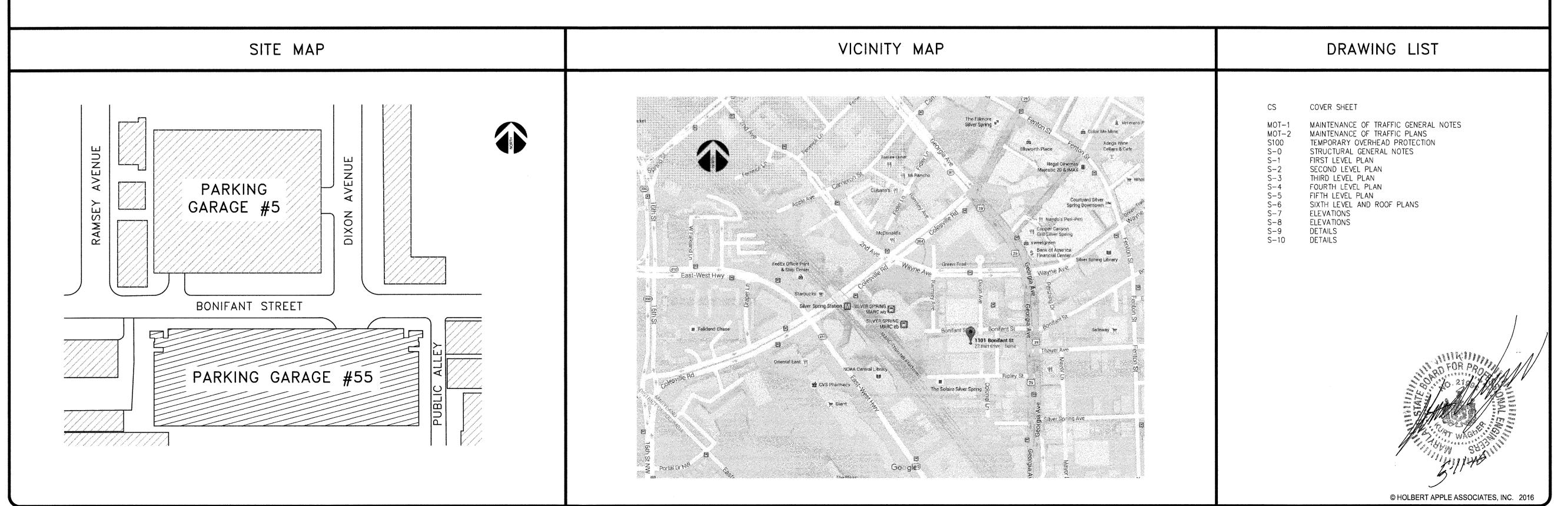
GARAGE REPAIRS MONTGOMERY COUNTY GARAGE #55 SILVER SPRING, MARYLAND IFB NO. 1050970









S Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

Ph (301) 570-1460
Fax (301) 570-1462

TY GARAGE

1101 Bonifant Stree

POR CONSTRUCTION 5/11/16

MONTGON

COVER SHEET

PROJECT NO.:

15-184

DATE:

04/08/16

SCALE:

AS NOTED

- 1. THE CONTRACTOR SHALL REFER TO THE TEMPORARY TRAFFIC CONTROL PLAN (TTCP) DRAWINGS TO SELECT THE APPROPRIATE WORK ZONE TEMPORARY TRAFFIC CONTROLS FOR EACH PHASE OF CONSTRUCTION. WORK ZONE SITUATIONS WHICH ARE NOT ADDRESSED IN THE TTCP SHALL CONFORM TO THE GUIDELINES SET FORTH IN PART 6 OF THE MARYLANDMANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OF STREETS AND HIGHWAY
- (MDMUTCD).
 2. THE CONTRACTOR MUST HAVE A "CERTIFIED" TRAFFIC CONTROL MANAGER ON SITE DURING ALL PHASES OF
- 2. THE CONTRACTOR MUST HAVE A CENTIFIED INAFFIC CONTROL MANAGER OF SITE CONSTRUCTION AT ALL TIMES.

 3. EACH PHASE OF CONSTRUCTION, INCLUDING THE FOLLOW UP RESTORATION OPERATIONS SHALL BE PROVIDED WITH APPROPRIATE WORK ZONE TRAFFIC CONTROLS.

 4. ROAD CLOSURES OF ANY DURATION SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION WITH JUSTIFICATION AS TO WHY WORK ACTIVITY CANNOT OCCUR WHILE TRAFFIC IS BEING MAINTAINED. ROAD CLOSURE SHALL REQUIRE ADDITIONAL TEMPORARY TRAFFIC CONTROLS INCLUDING ADVANCE NOTIFICATION, APPROACH, AND DETOUR SIGNAGE, AS APPROVED BY TRAFFIC ENGINEERING DESIGN AND
- 5. ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS ALL SIDEWALK CLOSURES SHALL REQUIRE THE APPROVAL OF THE TRAFFIC ENGINEERING DESIGN AND OPERATIONS SECTION. ANY SIDEWALK CLOSURE GREATER THAN TWO (2) WEEKS SHALL REQUIRE THE SUBMITTAL OF A WRITTEN REQUEST TO THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS AND MAY REQUIRE ADDITIONAL TEMPORARY TRAFFIC CONTROLS AND/ OR TEMPORARY SIDEWALK BY—PASS. ANY WORK AFFECTING SIDEWALK SHALL BE SPECIFIED AND A PROPER PEDESTRIAN DETOUR SHALL BE SHOWN ON PLANS AND SUBMITTED FOR REVIEW. SIDEWALK CLOSURES SHALL BE LIMITED TO OCCUR ONLY DURING THE ACTUAL WORK ACTIVITY. DURING CLOSURE, SIDEWALKS SHALL BE BARRICADED TO PHYSICALLY PREVENT PEDESTRIAN PASSAGE AND APPROPRIATE PEDESTRIAN DETOURS SHALL BE DOSTED DURING ALL OTHER TIMES PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK APPEA WAS A POSTED. DURING ALL OTHER TIMES, PROVISIONS FOR SAFE PEDESTRIAN ACCESS THROUGH THE WORK AREA, VIA A TEMPORARY WALKWAY SHALL BE PROVIDED.

 6. ANY WORK WITHIN THE TRAVELED PORTION OF ROADWAYS SHALL BE RESTRICTED TO THE HOURS OF 9:00 AM TO 3:30
- PM, MONDAY THROUGH FRIDAY. WORK ON HOLIDAYS AND WEEKENDS SHALL NOT OCCUR UNLESS AN EXCEPTION IS
- PM, MONDAY THROUGH FRIDAY. WORK ON HOLIDATS AND WEEKENDS SHALL NOT OCCUR UPLESS AN EXCEPTION IS
 GRANTED IN WRITING BY THE COUNTY'S DPS INSPECTOR.

 7. CONSTRUCTION ACTIVITY, LOADING OR UNLOADING OF EQUIPMENT SHALL NOT BLOCK ANY TRAFFIC LANE OTHER THAN
 THOSE DELINEATED WITHIN THE WORK ZONE.

 8. EXCLUSIVE OF EMERGENCY WORK, THE CONTRACTOR SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND
 INFORM THEM OF THE SCOPE AND THE TIMING OF CONSTRUCTION. A MINIMUM OF 24 HOURS NOTIFICATION SHALL BE
 REQUIRED PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY ON THE SITE.

 9. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY
 OWNED MAINTAINED TO ALL DRIVEWAYS UNLESS PERMISSION FOR CLOSURE IS GRANTED BY THE PROPERTY
- OWNER/MANAGER. HOWEVER, ACCESSIBILITY FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

 10. PAVEMENT EXCAVATION SHALL BE LIMITED TO A MAXIMUM OF ONE TRAVEL LANE AT ANY TIME UNLESS OTHERWISE.
- SPECIFIED ON THE TICP.

 11. IF ANY TEMPORARY TRAFFIC CONTROL SIGNS ARE TO BE PLACED ALONG A MSHA ROADWAY OR WITHIN THE LIMITS OF AN INCORPORATED AREA, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCY OF SIGNAGE TO BE INSTALLED.

 12. NO HAZARDOUS MATERIALS SHALL BE STORED WITHIN PUBLIC RIGHT—OF—WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACES OR SIDEWALK DURING NON—WORK HOURS.
- 13. ALL EXISTING TRAFFIC CONTROL DEVICES (I.E. SIGNS, MARKING, ETC.) THAT MUST BE REMOVED SHALL BE REPLACED IN THEIR PROPER LOCATION PRIOR TO THE COMPLETION OF THE PROJECT. COST FOR THE REPLACEMENT AND/OR REPAIR OF DEVICES DAMAGED AS A RESULT OF THE PROJECT SHALL BE ASSESSED TO THE CONTRACTOR.

 14. FOR MERGING, SHIFTING, SHOULDER TAPER, THE MAXIMUM SPACING BETWEEN DEVICES EQUALS THE POSTED SPEED IN
- 15. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MOMUTCD. ALL SIGNS, TRAFFIC DRUMS AND CONES SHALL BE FULLY REFLECTORIZED WITH HIGH INTENSITY, REFLECTIVE SHEETING AS PER THE MOMUTCD. 16. PROVISION SHALL BE MADE FOR SAFE MAINTENANCE OF PEDESTRIAN AND BICYCLE TRAFFIC, SUBJECT TO APPROVAL OF
- THE COUNTY'S DPS INSPECTOR. AT LEAST ONE 10-FOOT TRAVEL LANE SHALL BE AVAILABLE FOR TRAFFIC AT ALL 17. SIGNAGE, TRAFFIC DRUMS, TRAFFIC CONES, AND ARROW PANELS SHALL BE PLACED IN ACCORDANCE WITH THE
- APPROPRIATE TYPICAL AND SPACING CHART. WORK AREA AHEAD (W20-1 MODIFIED) SIGNS MUST BE INSTALLED AT THE END OF EACH WORKDAY WHEN TEMPORARY AGGREGATE RAMPING IS IMPLEMENTED. CHANNELIZING DEVICES SHALL BE PLACED ALONG EXCAVATIONS AT TEN (10) FOOT INTERVALS. ARROW PANELS (FLASHING MODE ONLY) SHALL BE USED AT THE BEGINNING OF ANY LANE CLOSURE ON A MULTI-LANE ROADWAY. 18. APPROPRIATE DISTANCES FOR SIGN LEGENDS ARE "AHEAD", "500 FT", "1000 FT", "1500 FT", OR "1/2 MILE". FOR DISTANCES LESS THAN 500 FEET, "AHEAD" SHALL BE USED.
- 19. ALL WARNING SIGNS, UNLESS OTHERWISE SPECIFIED, SHALL BE A MINIMUM OF 48" X 48", BLACK SYMBOL OR LEGEND ON DRANGE BACKGROUND AND DIAMOND SHAPED. ALL WARNING SIGNS NOT APPLICABLE TO THE ACTUAL SITUATION SHALL BE REMOVED OR COVERED DURING NON-APPLICABLE PERIODS. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF ONE (1) FOOT ABOVE THE LEVEL OF THE ROADWAY, WITH HIGHER MOUNTING HEIGHTS DESIRABLE.

 20. DURING NIGHTTIME OPERATIONS TRAFFIC DRUMS SHALL BE USED. HOWEVER, FOR EMERGENCY WORK ACTIVITIES WHERE TRAFFIC DRUMS ARE NOT READILY AVAILABLE, REFLECTORIZED TRAFFIC CONES THAT ARE A MINIMUM OF TWENTY EIGHT
- (28) INCHES IN HEIGHT AND HAVING SIX (6) INCH AND FOUR (4) INCH REFLECTIVE COLLARS WITHIN THE TOP SIXTEEN (16) INCHES OF THE COME MAY BE USED. ALL WORK AREAS LEFT UNATTENDED AT NIGHT SHALL BE DELINEATED WITH
- 21. WHEN TEMPORARY CONCRETE BARRIER (TCB) IS USED, REFLECTORIZED MARKERS ARE REQUIRED AS PER TTCP 199.02 ALSO, A 12" X 36" OBJECT MARKER (VERTICAL PANEL AS PER TTCP 109.01) SHALL BE INSTALLED.

 22. WHEN PAVEMENT MARKINGS HAVE BEEN OBLITERATED BY THE WORK ACTIVITY, THE CONTRACTOR SHALL INSTALL ANY CRITICAL INTERIM PAVEMENT MARKINGS PRIOR TO THE END OF THE WORKDAY AS SPECIFIED BY THE COUNTY'S DPS INSPECTOR AND/OR THE DIVISION OF TRAFFIC ENGINEERING AND OPERATIONS. ON ROAD SECTIONS THAT ARE NOT SCHEDULED TO BE OVERLAID, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE (REMOVABLE) DETOUR GRADE MARKING TAPE. ANY CONFLICTING MARKINGS, WHICH NEED TO BE TEMPORARILY REMOVED, ARE TO BE MASKED USING "3M REMOVABLE BLACK LANE MASK" OR AN APPROVED EQUAL. ON ROAD SECTIONS THAT ARE TO BE OVERLAD, TEMPORARY MARKINGS CAN BE EITHER TAPE OR PAINT. ANY CONFLICTING MARKINGS SHOULD BE REMOVED WITH A PAVEMENT GRINDER.
- 23. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL ACCIDENTS AND/OR DAMAGE TO PERSONS AND/OR
- PROPERTY DAMAGE RESULTING FROM HIS OPERATIONS.

 24. HAZARDOUS MATERIALS SHALL NOT BE STORED WITHIN PUBLIC RIGHT-OF-WAY. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON THE ROADWAY SURFACE OR SIDEWALK DURING NON-WORK PERIODS. ALL STORED MATERIALS AND EQUIPMENT SHALL BE SET BACK AT LEAST SIX (8) FEET BEHIND THE CURB ALONG A CLOSED SECTION ROADWAY AND AT LEAST TWELVE (12) FEET FROM THE EDGE OF AN OPEN SECTION ROADWAY.
- 25. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME, TTC DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.

 26. AT THE COMPLETION OF WORK ACTIVITIES, CONDITIONS WITHIN THE PUBLIC SPACE SHALL BE FULLY RESTORED TO THOSE THAT EXISTED PRIOR TO THE WORK ACTIVITY.
- 27. THE COUNTY'S DEPARTMENT OF PERMITTING SERVICES (DPS) INSPECTOR HAS THE AUTHORITY TO MODIFY THE TTCP AS DEEMED NECESSARY. THE INSPECTOR HAS THE AUTHORITY TO GROER THE CONTRACTOR TO STOP WORK AND VACATE
- THE PUBLIC RIGHT-OF-WAY IF THE TTCP IS NOT COMPLIED WITH. 28. THE IMPLEMENTATION DATE AND CONTINUANCE OF WORK ACTIVITIES MAY BE ALTERED AT THE DISCRETION OF THE COUNTY'S DPS INSPECTOR IN THE EVENT OF CONFLICTS WITH PREVIOUSLY APPROVED OR EMERGENCY ACTIVITIES.

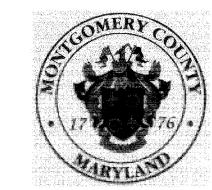
CONTACT INFORMATION

- 1. THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION SYSTEMS ENGINEERING TEAM AT 240-777-2100 AT LEAST TWO WEEKS IN ADVANCE TO COORDINATE ANY MINOR TRAFFIC SIGNAL WORK, MAJOR TRAFFIC SIGNAL WORK SHALL BE COORDINATED A MINIMUM OF THIRTY (30) DAYS IN ADVANCE OF THE PROJECT. THE PERMITTEE SHALL CONTACT THE MONTGOMERY COUNTY TRANSPORTATION MANAGEMENT CENTER AT 240-777-2100 A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK TO HAVE EXISTING TRAFFIC SIGNAL EQUIPMENT MARKED.
- CONTACT THE MCDOT TRANSPORTATION MANAGEMENT CENTER AT 240-777-2100 BETWEEN 5:00 AM AND 11:00 PM TO INFORM THEM OF TEMPORARY LANE CLOSURES IN THE VICINITY OF ANY TRAFFIC SIGNALS. 3. THE PERMITTEE SHALL CONTACT THE TRAFFIC ENGINEERING DESIGN & OPERATIONS SECTION (TEDO) AT 240-777-6000 AT LEAST TEN (10) WORKING DAYS IN ADVANCE OF THE FINAL PAVING OPERATION TO SCHEDULE THE INSTALLATION OF PERMANENT PAVEMENT MARKINGS AND
- MONTGOMERY COUNTY RIDE-ON TRANSIT BUS SYSTEM STACY COLETTA (240)777-5836 5. SILVER SPRING VOLUNTEER FIRE DEPARTMENT (240)773-4701
- 6. MONTGOMERY COUNTY PUBLIC SCHOOLS TODD WATKINS, DIRECTOR (301)840-8130.

TRAFFIC CONTROL NOTES

- 1. ALL TEMPORARY TRAFFIC SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES USED FOR MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD 2011 EDITION), AND FEDERAL AND STATE STANDARD HIGHWAY SIGN BOOKS.
- . MISS UTILITY SHALL BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF WORK. SIGN INSTALLATION SHALL NOT LAST ANY LONGER THAN 15 MINUTES PER LOCATION. IF LONGER THAN 15 MINUTES
- APPROPRIATE TRAFFIC CONTROL AND PERMITS SHALL BE USED. ALL TRAFFIC CONTROL DEVICES ARE TO BE REMOVED FROM VIEW WHEN NOT IN USE.
- 5. WHEN CONSTRUCTION STAGING IS REQUIRED INSIDE THE LIMITS OF THE INTERSECTION, THE SIGNAL SHALL BE PUT INTO A FLASHING RED OPERATION BY LAW ENFORCEMENT. THE INTERSECTION SHALL BE CONTROLLED BY A FLAGGING OPERATION. 6. FLAGGING OPERATIONS:
- a. WHEN POSSIBLE, TWO-WAY TRAFFIC SHALL BE MAINTAINED, OTHERWISE, FLAGGERS SHALL BE USED TO CONTROL TRAFFIC. b. Flaggers shall be maryland state highway administration or atssa approved flaggers and shall be used at THE DIRECTION OF THE COUNTY INSPECTOR. FLAGGERS SHALL USE STOP/SLOW PADDLES TO DIRECT TRAFFIC.
- C. RADIO COMMUNICATION SHALL BE REQUIRED BETWEEN FLAGGERS AT THE DISCRETION OF THE COUNTY INSPECTOR OR UNDER THE FOLLOWING CONDITIONS:
- I. IF THE FLAGGERS CANNOT SEE EACH OTHER.
- II. IF THE LANE CLOSURE EXCEEDS 200 FEET. 7. PAVEMENT DROP-OFF
- G. ANY EXCAVATION(S) IN THE ROADWAY SHALL BE PAVED TO LEVEL GRADE OR PLATED AND THE ROADWAY REOPENED TO ITS FULL CROSS-SECTION PRIOR TO THE END OF EACH WORKDAY. "STEEL PLATES" (W95-5(1)) SIGNS SHALL BE PLACED APPROXIMATELY 250 FEET IN ADVANCE OF ANY STEEL PLATE. ANY EXCAVATIONS IN THE SIDEWALK SHALL BE BACKFILLED OR PLATED PRIOR TO THE END OF EACH WORKDAY AND SIDEWALK REOPENED TO ITS FULL CROSS SECTION
- b. TRAFFIC SHALL NOT BE PERMITTED WITHIN TEN (10) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS PROTECTED BY TEMPORARY CONCRETE BARRIERS OR RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE FROM THE EDGE OF PAVEMENT. WHEN RAMPING IS UTILIZED, TEMPORARY TRAFFIC CONTROL DRUMS SHALL BE POSITIONED ADJACENT TO THE EDGE OF THE WORK AREA ON THE TRAFFIC SIDE OF THE SLOPE.
- C. TRAFFIC SHALL NOT BE PERMITTED WITHIN TWO (2) FEET OF ANY EXCAVATION THAT RESULTS IN A VERTICAL DROP-OFF OF MORE THAN TWO (2) INCHES BUT NO MORE THAN FIVE (5) INCHES IN THE LEVEL OF PAVEMENT DURING NON-WORKING HOURS UNLESS EITHER RAMPED WITH AGGREGATE MATERIAL AT A 3:1 OR FLATTER SLOPE, PROVIDED WITH AN ABUTTING WEDGE OF BITUMINOUS MATERIAL AT A 3:1 OR FLATTER SLOPE OR PROTECTED BY TRAFFIC DRUMS.
- d.IN AREAS WHERE A DROP-OFF IN THE LEVEL OF PAVEMENT IS TWO (2) INCHES OR LESS, TRAFFIC MAY BE ALLOWED TO FREELY CROSS UNDER THE FOLLOWING CONDITIONS:
- I. WHERE LONGITUDINAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, WARNING SIGNS SHALL BE POSTED INDICATING "UNEVEN LANES" (W8-11). THESE SIGNS SHOULD BE PLACED 250 FEET IN ADVANCE OF THE UNEVEN JOINT AND BE SPACED AT APPROPRIATE INTERVALS THROUGHOUT THE AREA OF THE UNEVEN JOINT.
- II. WHERE LATERAL PAVING JOINTS OF TWO (2) INCHES OR LESS ARE EXPOSED TO TRAFFIC, A "BUMP" (WS-1) SIGN SHALL BE POSTED 100 FEET IN ADVANCE OF THE JOINT.
- III. WHEN MILLED PAVEMENT IS LEFT EXPOSED TO TRAFFIC A "ROUGH ROAD" (WB-8) OR "GROOVED PAVEMENT" (WB-8A) SIGN SHALL BE PLACED 250 FEET IN ADVANCE OF THE MILLED AREA. 8. PARKING RESTRICTIONS
- O. THE CONTRACTOR SHALL CONTACT THE MCDOT, DIVISION OF PARKING MANAGEMENT AT 240-777-6000 A MINIMUM OF 48 HOURS IN ADVANCE TO ARRANGE FOR PAYMENT AND THE BAGGING OF ALL PARKING METERS WITHIN THE WORK ZONE. METER NUMBERS AND LOCATION MUST BE SPECIFIED.
- 6. BAGGING AGREEMENT SHALL BE KEPT AVAILABLE BY THE CONTRACTOR/PERMITTEE FOR INSPECTION BY THE DPS INSPECTOR AT ANY TIME. PROHIBITING THE USE OF METERED SPACES BY THE CONTRACTOR/PERMITTEE WITHOUT RECEIPT OF BAGGING AGREEMENT' IS SUBJECT TO FINES.
- C. CONTRACTOR/PERMITTEE SHALL COORDINATE WITH DIVISION OF PARKING MANAGEMENT TO MAKE PAYMENT FOR ADDITIONAL BAGGING AND REMOVAL WHENEVER MORE SPACES ARE TEMPORARY REQUIRED.
- d. ALL EXISTING MONTGOMERY COUNTY PARKING SIGNS SHALL BE COVERED OR BAGGED BY THE CONTRACTOR/PERMITTEE FOR THE DURATION OF WORK; AND A TEMPORARY NO PARKING ANYTIME (177-4) SIGN SHALL BE INSTALLED IN THE AFFECTED arking space(s). Existing montgomery county parking meter pipes/poles shall not be used for temporary
- 8. WHEN IT IS NECESSARY TO RESTRICT PARKING IN A NON-METERED AREA TO FACILITATE WORK ACTIVITY, THE PERMITTEE SHALL CONTACT THE APPROPRIATE COUNTY POLICE STATION FOR TEMPORARY "NO PARKING" SIGNS.
- I. THE CONTRACTOR/PERMITTEE SHALL RESTORE ALL AFFECTED MONTGOMERY COUNTY PARKING SIGNAGE TO THEIR PREVIOUS

CONSTRUCTION ACTIVITY DURATION REPAIR PARKING GARAGE FACADE



MONTGOMERY COUNTY MARYLAND

IFB NO. 1050970

PROJECT:

CLIENT:

GARAGE 55 PARAPET WALL REPAIR

MONTGOMERY COUNTY GOVERNMENT DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MD 20878

STRUCTURAL ENGINEERS:

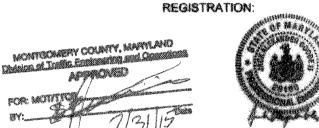


POTOMAC, MARYLAND 20854 TEL: (304) 881-1441 FAX: (301) 881-8664

SUB-CONSULTANT:



800 KING FARM BOULEVARD ATH FLOOR ROCKVILLE MD 20850 TEL: (301) 881-2545 FAX: (301) 881-0814



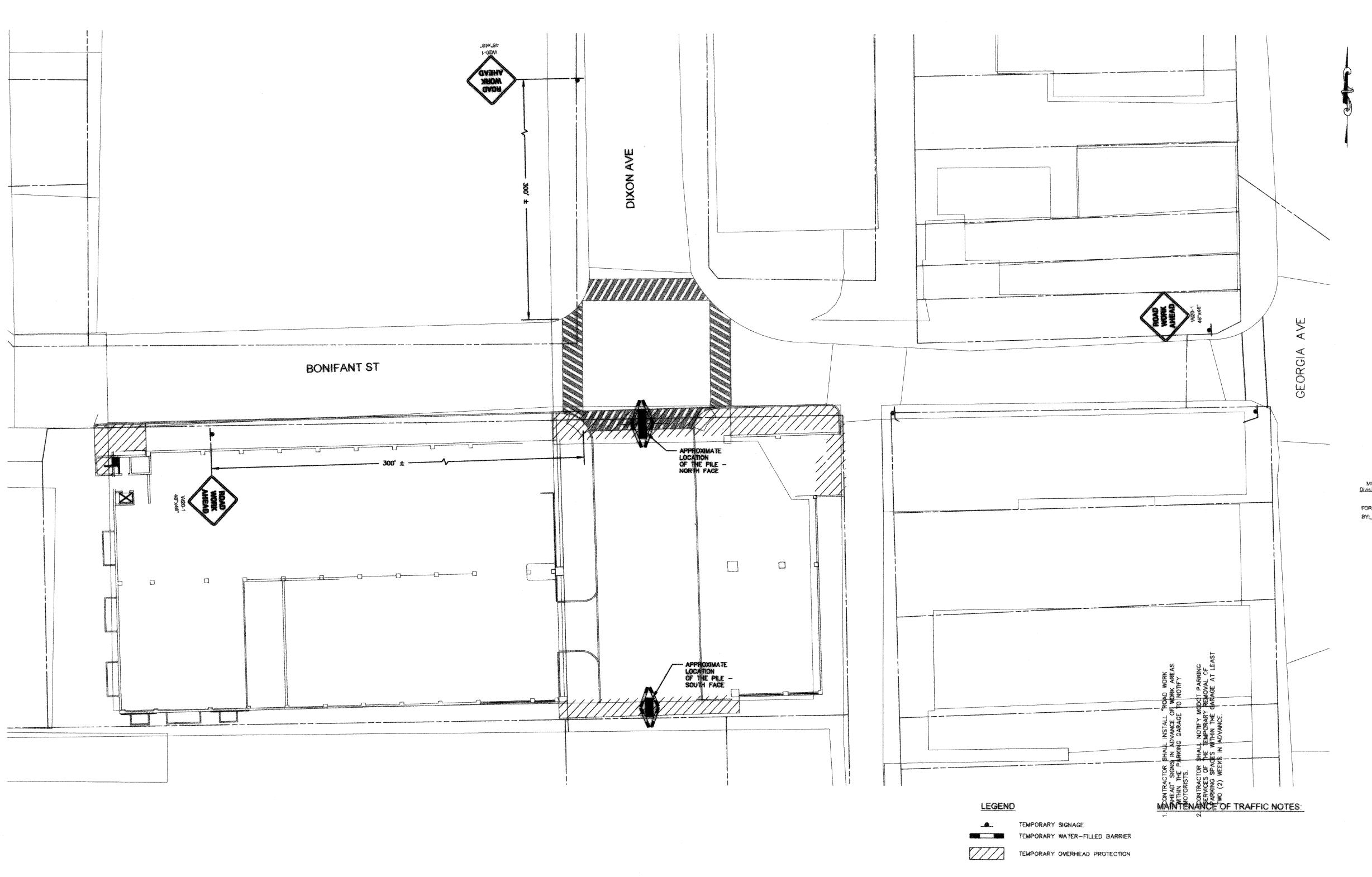
NO. DATE ISSUE DESCRIPTION 1-28-15 90% NOT FOR CONSTRUCTION 7-14-15 FINAL ---------************** SK&A PROJECT NO: 13-410 DRAWN BY:

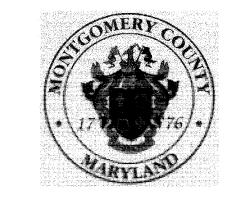
CHECKED BY: KEY PLAN:

SHEET TITLE:

MAINTENANCE OF TRAFFIC **GENERAL NOTES**

SHEET NUMBER:





MONTGOMERY COUNTY MARYLAND

IFB NO. 1050970

PROJECT:

CLIENT:

GARAGE 55 PARAPET WALL REPAIR

MONTGOMERY COUNTY GOVERNMENT DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MD 20878

STRUCTURAL ENGINEERS:



Smislova, Kehnemui & Associates, P.A.
Consulting Structural Engineers
12505 PARK POTOMAC AVE.
SUITE 200
POTOMAC, MARYLAND 20654
TEL: (301) 881-8664

SUB-CONSULTANT:



A. Morton Thomas and Associates, Inc.
Civil Engineers
500 KING FARM BOULEVARD
ATHEROGA
ROCKVILLE MD 20850
TEL: (301) 881-2545
FAX: (301) 881-0814

REGISTRATION:

MONTGOMERY COUNTY, MARYLAND
Division of Traffic Engineering and Operations

NO.	DATE	ISSUE DESCRIPTION
	1-28-15	90% NOT FOR CONSTRUCTION
	7-14-15	FINAL
		The state of the s
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
SK&A	PROJECT	NO: 13-4
DRAV	VN BY:	.17

GRAPHIC SCALE

(IN FEET) 1 inch = 20 ft.

SHEET TITLE:

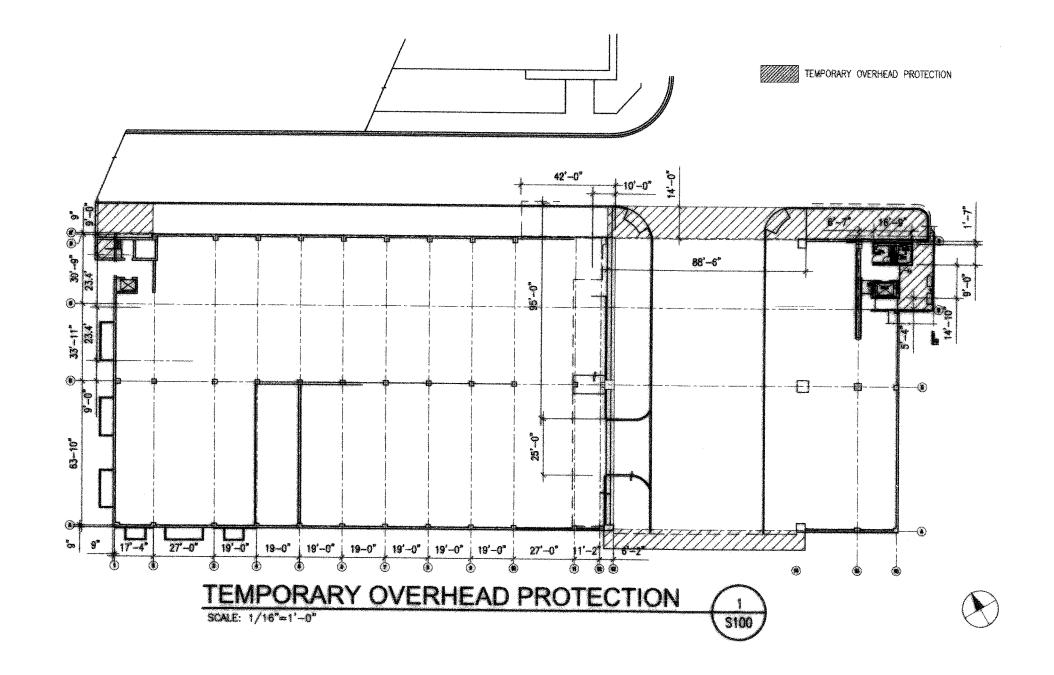
KEY PLAN:

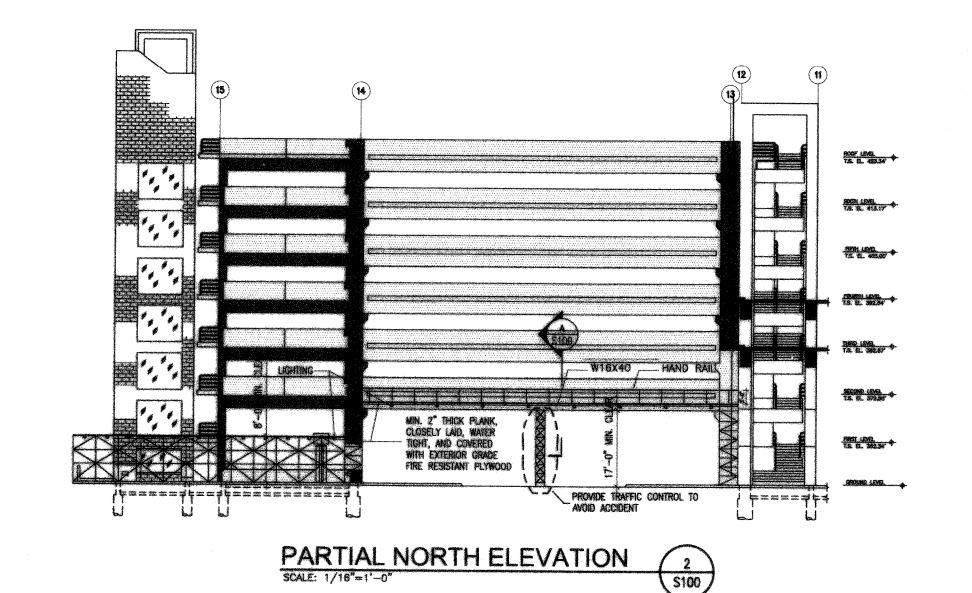
MAINTENANCE OF TRAFFIC PLAN

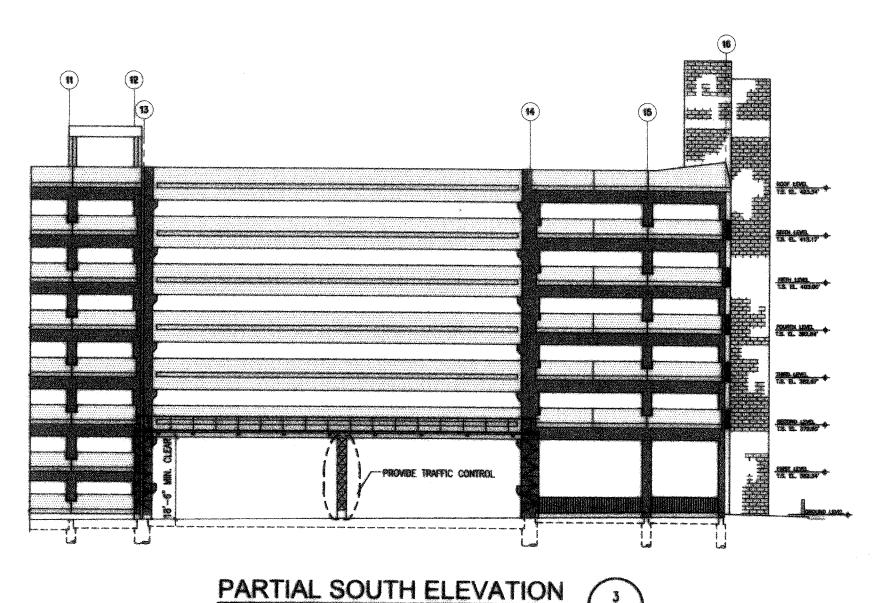
SHEET NUMBER:

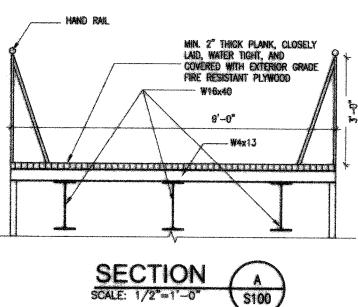
MOT-2

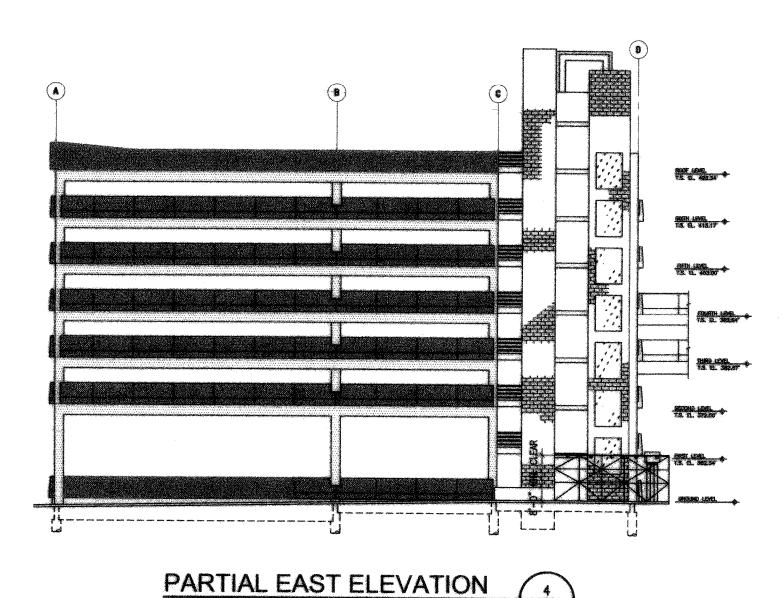
Original drawing is 30" x 42". Scale entities accordingly if reduced.

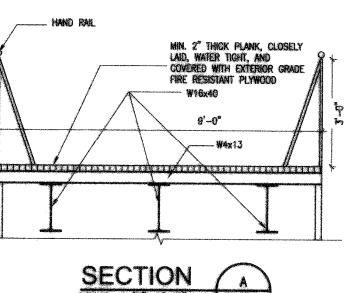












GENERAL NOTE

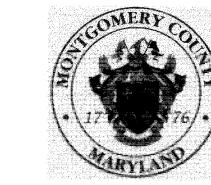
- 1. THE OVERHEAD PROTECTION SHOWN IN THE DRAWING IS CONCEPTUAL AND FOR BIDDING PURPOSE GILLY. THIS OVERHEAD PROTECTION DETAIL CAN NOT BE USED FOR CONSTRUCTION IN ANY CIRCUMSTANCE.
- 2. IT IS CONTRACTOR'S RESPONSIBILITY TO DESIGN A SAFE AND STRUCTURALLY SOUND OVERHEAD PROTECTION, WHICH MEETS ALL THE DESIGN REQUIRED THE MONTGOMERY COUNTY AND THE STATE OF MARYLAND.

 3. THE OVERHEAD PROTECTION MUST BE DESIGNED BY A PROFESSIONAL ENGINEER OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER DESIGN DOCUMENTS AND DETAILS MUST BE STAMPED AND SIGN BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF MARYLAND.

 4. OVERHEAD PROTECTION DETAILS AND TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE MONTGOMERY COUNTY FOR APPROVAL PRIOR TO FINAL
- 5. ANY DEVIATION FROM THE FINAL APPROVED DETAILS MUST BE RE APPROVED BY THE MONTCOMERY COUNTY BEFORE CONSTRUCTION.

- 1. ADA COMPLIANCE: ALL COVERED WALKWAYS CONSTRUCTED UNDER THIS SECTION MUST PROVIDE AN ACCESSIBLE PEDESTRIAN ROUTE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA). THIS INCLUDES, BUT IS NOT LIMITED TO: CONSTRUCTING STRUCTURAL FLOORS WHEN REQUIRED (SEE NUMBER 3 BELOW) THAT HAVE A SURFACE THAT IS FIRM, STABLE AND SLIP RESISTANT, AND THAT IS COMPLIANT IN SLOPE, COUNTER SLOPE, ACCESSIBLE ROUTE; AND IMPLEMENTING SUFFICIENT MEASURES TO ENSURE THE SAFETY AND WELFARE OF THE PEDESTRIAN(S) TRAVERSING THE SIFE. ALL Edward Color Color RAMPS WITH A RISE GREATER THAN SIX INCHES (6 IN) SHALL BE CONSTRUCTED WITH HANDRAILS ON BOTH SIDES OF THE RAMP.
- 2. FLOOR: STELLEDAL FLOORS ARE NOT REQUIRED LINLESS NEEDED TO CROSS AN OPENING OR AN OBSTRUCTION IN THE SIDEWALK, TO COMPLY WITH REQUIREMENTS OF THE MAIA, OR AS MONTECIMENT COUNTY. OTHERWISE, THE SIDEWALK MAY SERVE AS THE FLOOR OF THE COVERED WALKWAY. ANY STRUCTURAL FLOOR PROMISED SHALL BE CONSTRUCTED OF PLANKING CLOSELY LAID AND MADE TIGHT. THE FLOOR SHALL BE DESIGNED FOR A LIVE LOAD OF THREE HUNDRED POUNDS PER SQUARE FOOT (300 PSF), SHALL BE TREATED WITH A NON-SLIP COATING, PROMDE ADEQUATE DRAINAGE, AND SHALL COMPLY WITH THE ADA REQUIREMENTS (SEE ITEM 2 ABOVE).
- ROOF: ROOFS OF CONTRET) MALEMANTS SHALL CONSIST OF PLANKING NO LESS THAN THE INDUSTRY STANDARD NOMINAL THICKNESS OF TWO INCHES (2 IN), CLOSELY LAID, MADE MATER TIDHT, AND COVERED WITH EXTERIOR GRADE FIRE RESISTANT PLYMOOD. ALL SILL PLATES AND POSTS SHALL BE GROUND CONTACT RATED PRESSURE—PRESENATIVE TRANSITO MATERIAL. ALL FASTENERS SHALL BE GALVANIZED STEEL. THE ROOF SHALL BE DESIGNED TO CARRY A LIVE LOAD. OF AT LEAST 200 POUNDS PER SQUARE FOOT (200 PSF). FOR COVERED WALKWAYS ADJACENT TO BUILDINGS 100 FEET OR LESS IN HEIGHT, THE ROOF SHALL BE DESIGNED TO CARRY A LIVE LOAD OF AT LEAST 150 POUNDS PER SQUARE FOOT (150 PSF).
- 4. HEIGHT: COVERED WALKWAYS SHALL HAVE A CLEAR AND UNOBSTRUCTED CELLING HEIGHT OF NOT LESS THAN EIGHT FEET (8 FT).
- 5. WIDTH: COVERED WALKWAYS SHALL HAVE A CLEAR UNDESTRUCTED WIDTH OF NOT LESS THAN EIGHT FEET 8 FT. WIDTH IS TO BE MEASURED FROM WALL TO WALL AND NOT FROM HANDRAIL TO WALL OR HANDRAIL TO HANDRAIL. COVERED WALKWAYS SHALL NOT ALLOW UNPROTECTED PASSAGE ALONG THE SIDEWALK ON EITHER SIDE OF THE COVERED WALKWAY.
- 6. LIGHTING: THE INTERIOR OF THE COVERED WALKWAY SHALL BE LIGHTED AT ALL TIMES. LIGHTS SHALL BE INSTALLED ON THE CEILING AND THE LEVEL OF ILLUMINATION SHALL BE THE EQUIVALENT OF THAT PRODUCED BY 100 WATT, 1,700 LUMEN MINIMUM, STANDARD INCAMPESCENT LAMPS ENCLOSED IN WANDE - RESIDENT FRITURES AND SPACED FIFTEEN FEET (15 FT) APART AND EIGHT FEET (8 FT) AROVE THE FLOOR LEVEL LIGHTS MUST BE LEFT ON CHEMICAL LIGHTS SHALL BE REPLACED OR REPAIRED BY THE NEXT BUSINESS DAY, LIGHTING SHALL DUMPLY WITH THE NATIONAL ELECTRICAL CODE AND THE STATE OF WARYLAND ELECTRICAL CODE.
- STRUCTURAL MEMBERS: THE STRUCTURAL MEMBERS OF THE COVERED WALKWAY SHALL BE ADEQUATELY BRACED AND CONNECTED TO PREVENT DISPLACEMENT OR DISTORTION OF THE FRAME WORK.
- 8. CONSTRUCTION FACING SIDE: THE SIDE OF THE COVERED WALKWAY FACING THE CONSTRUCTION AREA SHALL BE COMPLETELY ENCLOSED WITH PLYWOOD. EXCEPT THAT THE SIDE MAY HAVE OPENINGS, AT THE DISCRETION OF THE PERMIT HOLDER AND ADEQUATELY PROTECTED BY SCREENING, THAT ALLOW PEDESTRIANS TO VIEW THE WORK SITE.
- 9. ROADWAY FACING SIDE: THE SIDE OF THE CONTRED WALKWAY FACING THE ROADWAY SHALL NOT BE BUILT WITHIN OR ON ANY TREE BOX AND SHALL BE SET BACK FROM THE FACE OF CURB BY A MINIMUM OF ONE (1) FOOT. THE SIDE OF THE COVERED WALKWAY FACING THE ROADWAY WAY BE CONSTRUCTED OF CHAIN LINK, PLYWOOD (ONLY TO THE HEIGHT OF 3'6' FROM GRADE), OR BRACINGS. WITHIN FORTY FIVE FEET (45 FT) OF THE INTERSECTION OF TWO STREETS THE SIDE(S) FACING THE ROADWAY SHALL BE CONSTRUCTED TO MAINTAIN AN UNOBSTRUCTED LINE OF SIGHT FOR DRIVERS IN THE ROADWAY AND PEDESTRIANS USING THE COVERED WALKWAY. THE INTERSECTION OF TWO STREETS IS THE POINT OF INTERSECTION OF THE CURB LINES EXTENDED. IF THE COVERED WALKWAY IS CONSTRUCTED WITH A STRUCTURAL FLOOR, THE SIDE OF THE COVERED WALKWAY FACING THE ROADWAY SHALL BE EITHER CONTINUOUS NON-FLEXIBLE MATERIAL TO A HEIGHT OF 3 % OR IT SHALL BE PROVIDED WITH CONTINUOUS UPPER AND LOWER BAILINGS RUNNING THE LENGTH OF THE COVERED WALKWAY AT HEIGHTS SUFFICIENT TO PREVENT PEDESTRIANS FROM STRAYING OFF THE STRUCTURAL FLOOR.
- 10. BUILDING ENTRY: IF THE BUILDING IS ACTIVELY IN USE WHILE THE COVERED WALKWAY IS IN PLACE, THE COVERED WALKWAY SHALL BE DESIGNED TO MAINTAIN ADA ACCESSIBLE ENTRY TO AND EXIT FROM THE BUILDING. IT SHALL HAVE SIGNS OR STENGILING INDICATING THE NAMES OF THE STORES OR BUSINESSES THAT CAN BE ACCESSED DIRECTLY FROM THE COVERED WALKWAY. HAND WRITTEN SIGNS ARE NOT TO BE USED IN A COVERED WALKWAY.
- 1. HAND RAIL: A CONTINUOUS HANDRAIL SHALL BE INSTALLED ALONG AT LEAST ONE SIDE OF THE COVERED WALKWAY TO AID PEDESTRIANS. THE HANDRAIL SHALL COMPLY WITH THE REQUIREMENTS OF ADA. CURRENT REQUIREMENTS ARE THAT THE TOP OF THE HANDRAILS SHALL BE BETWEEN THIRTY FOUR INCHES AND THIRTY EIGHT INCHES (34 IN-38 IN) FROM GRADE; THE CLEARANCE BETWEEN THE HANDRAIL GRIPPING SURFACE AND THE ADJACENT SURFACE SHALL BE A MINIMUM OF ONE AND ONE HALF INCHES (1 1/2 IN); THE RAILS CANNOT BE OBSTRUCTED ALONG THEIR TOP OR SIDES; AND HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR TWELVE INCHES (12 IN) MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS WITH AN ADJACENT RAIL.
- 12. TRANSIT ACCESS: THE COVERED WALKWAY SHALL BE DESIGNED TO MAINTAIN ADA COMPLIANT ACCESS FROM THE SIDEWALK TO ANY METRORAL ENTRANCE, OPERATING BUS STOP, OR BUS SHELTER.
- 13. DIRECTIONAL SIGNS: THE COVERED WALKWAY SHALL HAVE STANS OR STENCILING AT ALL ENTRY POINTS, INCLUDING THOSE FROM A METRORAL ENTRANCE OR OPERATING BUS STOP, INDICATING THE NEXT INTERSECTION AND STREET NAMES IN EITHER DIRECTION OF TRAVEL THROUGH THE COVERED WALKWAY. HAND WRITTEN SIGNS ARE NOT TO BE USED IN A CONSINED WALKWAY.
- 14. SIDEWALK FIXTURES: THE COVERED WALKWAY SHALL BE DESIGNED TO INCORPORATE ANY EXISTING SIDEWALK FIXTURE, SUCH AS FIRE HYDRANTS, LIGHT POLES, TRAFFIC SIGNAL DEVICES, PARKING METERS, TRASH RECEPTACLES, BUS STOPS AND BUS SHELTERS, AND BENCHES. THE COVERED WALKWAY CANNOT COVER OR OBSTRUCT IN ANY WAY TRAFFIC OPERATION SIGNAGE AND SIGNALS, INCLUDING THOSE RELATED TO PARKING. IF THE COVERED WALKWAY CANNOT BE CONSTRUCTED WITHOUT THE REMOVAL OF AN EXISTING SIDEWALK FIXTURE, THE PERMIT HOLDER SHALL PROVIDE IN WRITING TO MIDOT DETAILS ABOUT: WHICH FIXTURE(S) ARE TO BE REMOVED, WHERE THEY WILL BE STORED PENDING THE COMPLETION OF THE WORK; AND HOW THEY WILL BE RESTORED UPON REMOVAL OF THE COVERED WALKWAY. APPROVAL BY MOOT MUST BE OBTAINED IN WRITING PRIOR TO THE REMOVAL OF ANY FIXTURE.
- 15. REMOVAL: THE COVERED WALKWAY SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE BUILDING CONSTRUCTION/REPAIR WORK, OR THE END OF ANY POTENTIAL HAZARD TO PEDESTRIANS. REMOVAL OF THE COVERED WALKWAY SHALL BE DONE WITHOUT DAMAGE TO ANY TREE OR THE TREE CANOPY. A TRAFFIC CONTROL PLAN FOR THE RAZING OF THE COVERED WALKWAY MUST ALSO BE PROVIDED AND APPROVED BY MOOT PRIOR TO REMOVAL OF THE COVERED WALKWAY MUST ALSO BE PROVIDED AND APPROVED BY MOOT PRIOR TO REMOVAL OF THE

CLIENT:



MONTGOMERY COUNTY MARYLAND

IFB NO. 1050970

PROJECT:

GARAGE 55 PARAPET WALL REPAIR

MONTGOMERY COUNTY GOVERNMENT DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MD 20878

STRUCTURAL ENGINEERS:



POTOMAC, MARYLAND 20854 TEL: (301) 881-1441 FAX: (301) 881-8664

SUB-CONSULTANT:

MONTOCKERY COUNTY, MARYLAND Brains of Traffic Engineering and Charlesons

REGISTRATION:

APPROVED



PROPESSIONAL ORTHICATION. HIGHEY CERTIFY THAT THESE DOCUMENTS WHICE PREPARED OF APPROVING BY HE, AND THAT I AM A DRAY LICENSED PROPERSIONAL PROPERTIES OF A PROPERTY AND THE REPORT OF A PROPERTY OF THE PROPERTY O NO. DATE ISSUE DESCRIPTION 1-28-15 90% NOT FOR CONSTRUCTION 3-30-15 FINAL

13-410

HCW

KEY PLAN:

DRAWN BY: CHECKED BY:

SK&A PROJECT NO:

SHEET TITLE:

TEMPORARY OVERHEAD PROTECTION

SHEET NUMBER:

Original drawing is 30" x 42". Scale entities accordingly if reduced.

a. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-11".

a. "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.

THE SCOPE OF WORK OF THIS PROJECT DOES NOT ALTER THE LOADING TO THE EXISTING MAIN WIND-FORCE

RESISTING SYSTEM OR WALLS BY MORE THAN 5%. IN ACCORDANCE WITH IEBC PROVISIONS, NO GLOBAL

THE SCOPE OF WORK OF THIS PROJECT DOES NOT ALTER THE SEISMIC LOADING ON THE EXISTING SEISMIC

FORCE RESISTING SYSTEM BY MORE THAN 5%. PER IBC PROVISIONS, NO GLOBAL ANALYSIS OR UPGRADE OF

THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED

ASTM C494

MIX TYPE

LATEX-OR MICROSILICA

MODIFIED CONCRETE

0.35 W/C RATIO CONCRETE

POLYMER-MODIFIED REPAIR

MORTAR

FORM AND PUMP CONCRETE

0.40 W/C RATIO CONCRETE

4. CONCRETE: AIR ENTRAIN ALL CONCRETE 6% ± 1 1/2% UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS. ALL

F′C @

28 DAYS

(PSI)

CONCRETE SHALL CONTAIN 3 GALS OF CORROSION IN HIBITING ADMIXTURE PER CY OF CONCRETE (INCLUDE

2. AGGREGATES: ASTM C33 (NORMAL WEIGHT); 3/4" NOMINAL MAXIMUM AGGREGATE SIZE.

ANALYSIS OR UPGRADE OF THE EXISTING WIND-FORCE RESISTING SYSTEMS HAVE BEEN CONDUCTED.

b. "ACI MANUAL OF CONCRETE PRACTICE -- PARTS 1 THROUGH 5".

THE SEISMIC FORCE RESISTING SYSTEM HAS BEEN CONDUCTED.

b. ROOF LEVEL: 50 PSF LIVE LOAD + 30 PSF SNOW LOAD

3. ADMIXTURES: AIR ENTRAINING ADMIXTURES ASTM C260

CHEMICAL ADMIXTURES

LIVE LOADS (PER ORIGINAL DESIGN DRAWINGS);

a. TYPICAL LEVEL: 50 PSF

c. STAIRS 100 PSF

IN THE CONSTRUCTION OF THIS PROJECT.

1. CEMENT:ASTM C150, TYPE I OR III

ADMIXTURE IN W/C CALCULATIONS)

a. SLAB SURFACE, EXPOSED

SURFACE REPAIR

WALL REPAIRS

c. PARTIAL DEPTH SLAB

REPAIRS

d. CURB REPAIRS

5. REINFORCEMENT:

BARS

SOFFIT, WALL AND BEAM

b. EPOXY COATED REINFORCING

a. DEFORMED REINFORCING BARS ASTM A615, GRADE 60

ASTM A775

b. SLAB SURFACE REPAIRS

REINFORCING AND SHALLOW

AND FULL-DEPTH SLAB AND

APPLICATION

MATERIALS

2. AMERICAN CONCRETE INSTITUTE (ACI)

DESIGN DATA

MND LOADS

SEISMIC LOADS

3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)

D. CONSTRUCTION

1. GENERAL:

a. DO NOTSCALE DRAWINGS

c. ADHESIVE REINFORCING BAR

DOWEL SYSTEM

THIS BUILDING HAS BEEN PREVIOUSLY DESIGNED BY OTHERS FOR THE WEIGHTS OF THE MATERIALS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS INDICATED IN THE LOAD DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS WITH CONSIDERATION OF REDUCED STRUCTURAL CAPACITY DUE TO DEMOLITION AND EXISTING DAMAGE AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGINGS, BRACING, SHEETING AND SHORING ETC. DRAWINGS OF SUCH TEMPORARY SUPPORTS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.

HILTI RE500, OR APPROVED EQUIVALENT

IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR

d. EXISTING BUILDING INFORMATION SHOWN IS AS INDICATED ON EXISTING BUILDING DRAWINGS PROVIDED BY OTHERS. FIELD VERIFY ALL EXISTING BUILDING INFORMATION SHOWN (DIMENSIONS, ELEVATIONS, UTILITIES, ETC.) AND NOTIFY THE OWNER AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.

e. UNLESS INDICATED OTHERWISE, NEW SLABS ARE TO BE AT THE SAME ELEVATIONS AS ADJACENT EXISTING SLABS.

f. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, DETAILS AND SPECIFICATIONS, THE MOST RIGID

g. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THIS WORK FROM THE PROPER GOVERNING AGENCIES.

h. WORK NOT INCLUDED ON SOME OF THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ON OTHER DRAWINGS SHALL BE REPEATED.

ANY DAMAGE TO EXISTING FACILITIES OR SITE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER WHICH CAUSES THE LEAST DISRUPTION TO EXISITING BUILDING OPERATIONS OR FACILITIES. THE CONTRACTOR SHALL CONSULT WITH, AND FOLLOW THE DIRECTIVES OF, THE OWNER CONCERNING ACCEPTABLE TIME OF CONSTRUCTION ACTIVITIES, NOISE CONTROL, ACCESS, SAFETY, EMPLOYEE PARKING, USE OF BUILDING FACILITIES, ETC.

k. THE CONTRACTOR SHALL PROVIDE DUST AND NOISE CONTROL PARTITIONS, DAMS OR OTHER METHODS AS NOTED OR AS REQUIRED TO PREVENT DUST, WATER OR EXCESSIVE NOISE FROM ENTERING OCCUPIED AREAS OF THE BUILDING. THE CONTRACTOR SHALL CLEAN ALL AREAS IN WHICH DUST, WATER OR DEBRIS FREOM CONSTRUCTION OPERATIONS ENTERS.

STORE AND HANDLE STRUCTURAL CONSTRUCTION MATERIALS TO PREVENT ANY ADVERSE EFFECTS ON THE PHYSICAL PROPERTIES OF THE MATERIAL.

m. PAY ALL COSTS, INCLUDING INVESTIGATION AND/OR REDESIGN, DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE CONTRACT DOCUMENTS TO BRING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

2. SHOP DRAWINGS AND SUBMITTALS:

REQUIREMENTS GOVERN.

a. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED WITHOUT REVIEW AND RETURNED.

b. SUBMIT SHOP DRAWINGS AT LEAST 15 BUSINESS DAYS BEFORE DATE REVIEWED SUBMITTALS WILL BE NEEDED. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL FIELD MEASUREMENTS. CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. SUBMIT THREE SETS OF PRINTS. TWO MARKED-UP SETS OF PRINTS WITH COMMENTS BY THE SER WILL BE RETURNED.

SUBMIT CALCULATIONS AND DRAWINGS CONCURRENTLY FOR EACH OF THE FOLLOWING ASSEMBLIES. DESIGN EACH ASSEMBLY UNDER THE DIRECT SUPERVISION OF AN ENGINEER REGISTERED IN THE PROJECTS JURISDICTION. ALL PORTIONS OF SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. UNSEALED SUBMITTALS WILL BE RETURNED AND REJECTED WITHOUT REVIEW. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES AND SPECIFICATIONS, AND FOR IMPACTS ON THE SUPPORTING STRUCTURAL SYSTEM. DESIGN FOR ALL GRAVITY AND LATERAL LOADS AND OTHER EFFECTS (INCLUDING CREEP, SHRINKAGE, THERMAL, ETC.) REQUIRED BY APPLICABLE CODES AND STANDARDS AS WELL AS THOSE INDICATED ON THE DRAWINGS

1) POST-TENSIONED CONCRETE (IF REQUIRED)

a) THE CONTRACTOR SHALL ENGAGE A QUALIFIED EXPERIENCED POST-TENSIONING SUBCONTRACTOR, ACCEPTABLE TO THE ENGINEER, TO PERFORM ALL NEW, OR REPAIR, WORK INVOLVING POST-TENSIONING SYSTEMS INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS. THE SUBCONTRACTOR SHALL SUBMIT DRAWINGS, SPECIFICATIONS AND WRITTEN PROCEDURES, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION, AS REQUIRED TO PERFORM THE WORK.

b) OBTAIN APPROVAL FROM APPLICABLE GOVERNING AGENCIES AND THE SER FOR ALL ANCHORAGES, COUPLERS AND MISCELLANEOUS HARDWARE.

2) FORMWORK, SHORES AND RESHORES

- a) INDICATE PLAN OF STRIPPING AND RESHORING PROCEDURES AND OPERATIONS ON SHOP
- b) DESIGN FORMWORK, SHORING, AND RESHORING SYSTEMS TO ACCOUNT FOR ADDITIONAL LOADS RESULTING FROM POST-TENSIONING STRESSING SEQUENCES INDICATED.
- c) REMOVAL OF FORMS IS NOT PERMITTED UNTIL CONCRETE HAS ACHIEVED A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH, ENABLING THE MEMBERS TO CARRY THEIR DEAD LOAD AND
- ANTICIPATED CONSTRUCTION LOADS. d) REMOVAL OF FORMS IS NOT PERMITTED UNTIL SUFFICIENT PRESTRESSING HAS BEEN APPLIED TO ENABLE THE MEMBERS TO CARRY THEIR DEAD LOAD AND ANTICIPATED CONSTRUCTION LOADS.

d. SUBMITTALS AND CERTIFICATIONS, IN ADDITION TO STANDARD INDUSTRY PRACTICE

- 1) CAST-IN-PLACE CONCRETE AND SPECIALTY REPAIR MATERIALS.
- a) MIX DESIGNS, INCLUDING DOCUMENTATION USED TO DETERMINE STANDARD DEVIATION IN ACCORDANCE WITH ACI 301...

INSPECTION AND TESTING:

- a. THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING AGENCY, ACCEPTABLE TO THE OWNER, TO PROVIDE ALL SERVICES AS INDICATED BELOW OR IN THE SPECIFICATIONS. SUBMIT REPORTS TO THE SER AND CODE OFFICIAL (AS APPLICABLE).
- b. CAST-IN-PLACE CONCRETE:
- 1) THE AGENCY SHALL INSPECT THE FORMWORK AND POST-TENSIONING AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENTS FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.
- 2) SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.
- 3) THE FOLLOWING NUMBER OF TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS:

2 @ 7DAYS, LAB CURED 2 @ 7 DAYS, FIELD CURED

2 @ 28 DAYS, LAB CURED 2 @ 28 DAYS, FIELD CURED 2 @ 56 DAYS, LAB CURED*

* 28-DAY BREAKS ARE THE STANDARD FOR CONCRETE ACCEPTANCE IN THE FINAL

STRUCTURE. RESERVE 56-DAY CYLINDERS FOR ADDITIONAL TESTING AT LOW 28-DAY BREAKS. 4) THE AGENCY SHALL OBTAIN AND TEST FIELD-CORED SAMPLES OF IN-PLACE CONCRETE AT THE

NOT BEEN ATTAINED. CORING LOCATIONS AND QUANTITIES SHALL BE DIRECTED BY THE ENGINEER.

5) INSPECTION BY AN APPROVED TESTING AGENCY IS REQUIRED FOR ALL POST-TENSIONED WORK

E. CAST-IN-PLACE CONCRETE

GENERAL

- a. COMPLY WITH REQUIREMENTS OF "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301-11), EXCEPT AS MODIFIED BY THESE NOTES AND PROJECT SPECIFICATIONS. KEEP COPY OF "ACI FIELD REFERENCE MANUAL, SP-15" IN FIELD OFFICE.
- b. ANY SPECIALTY REPAIR MATERIALS SHALL BE MIXED AND PLACED AS NOTED IN THE SPECIFICATIONS OR IF A PROPRIETARY MATERIAL, THE MANUFACTURER'S INSTRUCTIONS.
- c. ALL CONCRETE MATERIALS SHALL MEET OR EXCEED THE SPECIFICATION REQUIREMENTS.
- d. EPOXY COAT THE FOLLOWING IN PARKING STRUCTURES AND WHERE NOTED ON THE DRAWINGS:
- 1) ALL REINFORCING STEEL IN SLABS INCLUDING POUR STRIPS
- 2) ALL ACCESSORIES USED TO SUPPORT OR POSITION REINFORCING STEEL AND P-T TENDONS, SUCH AS SUPPORT BARS, SLAB BOLSTERS, HIGH CHAIRS, ETC. PLASTIC COATALL TIE WIRE.
- 3) ALL BEAM TOP STEEL AND STIRRUPS.
- 4) OTHER REINFORCEMENTS AND EMBEDS AS INDICATED.
- e. SPLICE REINFORCEMENT AS DETAILED OR AUTHORIZED BY THE SER. MAKE BARS CONTINUOUS AROUND CORNERS. SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.
- WELDING OF REINFORCING IS NOT PERMITTED.
- g. FIELD BENDING OF REINFORCING PARTIALLY EMBEDDED IN CONCRETE IS NOT PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE SER.
- h. SUPPLY WELDED WIRE FABRIC REINFORCEMENT IN SHEETS. LAP TWO FULL MESH LENGTHS AT SPLICES AND WIRE TOGETHER.
- i. FURNISH ALL ACCESSORIES, CHAIRS, SPACE BARS, SUPPORTS, ETC. NECESSARY TO SECURE
- j. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
- k. ERECT AND REMOVE FORMWORK, SHORES AND RESHORES IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND CALCULATIONS PREPARED, SIGNED AND SEALED BY THE ENGINEER REGISTERED IN THE PROJECTS JURISDICTION
- I. CAST ALL INSERTS AND SLEEVES IN-PLACE.
- m. PLACING SLEEVES THROUGH CONCRETE ELEMENTS IS ONLY PERMITTED WHEN SHOWN ON THE STRUCTURAL DRAWINGS, APPROVED SLEEVING SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER
- n. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND KEYS, UNLESS OTHERWISE SHOWN

- o. FINISH CONCRETE SLABS FLAT AND LEVEL WITHIN TOLERANCE, TO THE ELEVATION INDICATED ON THE DRAWINGS. PROVIDE ADDITIONAL CONCRETE REQUIRED DUE TO FORMWORK AND FRAMING DEFLECTION TO ACHIEVE THIS FINISHED TOP-OF-SLAB ELEVATION.
- p. CORE DRILLING OF ANY CONCRETE ELEMENT IS NOT PERMITTED UNLESS AUTHORIZED IN WRITING BY THE
- q. CHAMFER EXPOSED CONCRETE CORNERS, "X" x "X" MINIMUM, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
- r. WHEN INSTALLING POST-INSTALLED ANCHORS (EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) TAKE MEASURES TO AVOID DAMAGE TO EXISTING REINFORCING STEEL AND CONCRETE. BLOW HOLES CLEAN PRIOR TO PLACING ANCHORS.
- 2. POST-TENSIONED CONCRETE:
- a. WHERE INDICATED ON THE DRAWINGS, PROVIDE AN ENCAPSULATED PROTECTION SYSTEM CONSISTING OF CORROSION PROTECTION CAPS AT ALL TENDON ENDS, CORROSION PROTECTION SLEEVES AT ALL DEAD ENDS AND STRESSING ENDS (INCLUDING INTERMEDIATE STRESSING LOCATIONS) AND OTHER MISCELLANEOUS ACCESSORIES AS REQUIRED TO PRODUCE A WATERTIGHT SYSTEM.
- b. RECORDS OF ALL JACKING FORCES AND ELONGATIONS SHALL BE KEPT BY THE INSPECTION AGENCY AND SHALL BE PROMPTLY SUBMITTED TO THE ARCHITECT AND SER. DO NOT COMMENCE WITH FORMWORK STRIPPING AND CUTTING OF TENDON ENDS UNTIL ELONGATIONS HAVE BEEN REVIEWED AND APPROVED BY THE SER.
- c. REMOVAL OF FORMS IS NOT PERMITTED UNTIL SUFFICIENT PRESTRESSING HAS BEEN APPLIED TO ENABLE THE MEMBERS TO CARRY THEIR DEAD LOAD AND ANTICIPATED CONSTRUCTION LOADS.
- d. REINFORCE ALL POCKETS REQUIRED FOR ANCHORAGE TO PREVENT ANY DECREASE IN THE STRENGTH OF THE STRUCTURE.
- e. THE FIELD STRENGTH OF CONCRETE AT TRANSFER OF PRESTRESS SHALL BE A MINIMUM OF 3,000 PSI UNLESS OTHERWISE NOTED OR APPROVED BY THE SER. ANY ADDITIONAL CONCRETE CYLINDERS REQUIRED FOR STRENGTH VERIFICATION BEFORE 7 DAYS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR'S EXPENSE WHEN TEST RESULTS INDICATED SPECIFIED CONCRETE STRENGTHS HAVE F. SEALANT, COATINGS AND JOINT MATERIALS
 - 1. SEE SPECIFICATIONS FOR APPROVED SEALANT AND COATING MATERIALS AND APPLICATION PROCEDURES.

G. DEMOLITION

- 1. ALL SHORING AND DEWATERING, IF REQUIRED, SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. SHORING SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE PROJECTS JURISDICTION. ALL SUBMITTALS SHALL BEAR HIS SEAL AND SIGNATURE.
- 2. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL EXISTING OCCUPIED SPACES, STRUCTURES, CURBS, STREETS, SUBWAY SYSTEM, ETC. FROM DAMAGE BY CONSTRUCTION DEBRIS, WATER OR EQUIPMENT. THE CONTRACTOR SHALL NOT DISPOSE OF ANY DEBRIS, LIQUIDS, SLURRY, SPOILS OR CHEMICALS ON THE SITE, EXCEPT AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL RESOURCES.
- 3. PRIOR TO BEGINNING DEMOLITION ON SLABS OR BEAMS, THE CONTRACTOR SHALL INSTALL SHORING AND BRACING ADEQUATE TO FULLY SUPPORT THE LOADS NORMALLY SUPPORTED BY THE SLABS OR BEAMS AS NOTED IN THE REPAIR DETAILS.
- REMOVE DELAMINATED CONCRETE TO EXPOSE SOUND CONCRETE FREE OF FRACTURES, LOOSE AGGREGATE OR EXCESSIVE CRACKING. IF SUCH REMOVAL EXPOSES CORRODED REINFORCING BARS OR MORE THAN HALF OF ANY CLEAN REINFORCING BAR, REMOVE ADDITIONAL CONCRETE TO PROVIDE A MINIMUM 3/" CLEARANCE AROUND THE BARS. IF THE ENDS OF BARS INTERSECTING THE EDGE OF THE REPAIR AREA ARE CORRODED, REMOVE CONCRETE ALONG THE BAR (% MINIMUM CLEAR ALL AROUND) UNTIL THE BAR IS CLEAN OF CORROSION, IF SO DIRECTED BY THE ENGINEER.
- 5. THE EDGES OF ALL REPAIR AREAS SHALL BE CHIPPED AT APPROXIMATELY 90° FROM THE SURFACE OF THE MEMBER TO A MINIMUM OF 1/2" BEHIND THE REINFORCEMENT IF EXPOSED OR TO A MINIMUM DEPTH OF 1" FROM THE SURFACE IF NO REINFORCEMENT IS EXPOSED.
- 6. IF SURFACE PERIMETER OUTLINE OF REPAIR AREA IS IRREGULAR, TRIM ANY RE-ENTRANT CORNERS ≤ 100° ALONG A LINE WHICH INTERSECTS A POINT 2" BACK FROM THE CORNER ALONG EACH EDGE FORMING THE
- 7. IF THE REINFORCING STEEL IS REDUCED BY CORROSION TO LESS THATY 75% OF ITS ORIGINAL CROSS-SECTIONAL AREA, ADD A NEW BAR OF THE SAME SIZE AS NOTED IN DETAIL /S-. IF THERE IS INADEQUATE ROOM TO PROVIDE A LAP SPLICE FOR THE NEW BAR, CUT OFF THE EXISTING BAR AT THE UNDAMAGED SECTION ON EACH SIDE OF THE DAMAGED SECTION AND USE TENSION COUPLERS TO SPLICE IN A REPLACEMENT SECTION OF THE NEW BAR. BUILD OUT THE PATCH TO PROVIDE A MINIMUM 11/2" OVER THE COUPLER.
- 8. IF THE DEMOLITION DOES NOT EXTEND BEHIND THE EXISTING REINFORCING STEEL, DRILL AND EPOXY-GROUT 1/4" ϕ HOOKED ALL-THREAD "PINS" MINIMUM 3" INTO THE FACE OF THE REPAIR AREA AT 6" O.C. EACH WAY.
- 9. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, REMOVE ANY CONDUIT UNCOVERED IN REPAIR AREAS.
- 10. ALL EXISTING SURFACES AGAINST WHICH A CONCRETE POUR IS TO BE PLACED SHALL BE ABRASIVE-BLAST CLEANED OR HYDRO-SCARIFIED AND THEN WASHED DOWN WITH HIGH-PRESSURE WATER.
- 11. PRIOR TO PLACING PATCHING MATERIAL, APPLY A PENETRATING CALCIUM-NITRATE BASED CORROSION INHIBITING MATERIAL AROUND THE PERIMETER OF THE PATCH.

H. MECHANICAL, ELECTRICAL AND PLUMBING WORK

1. THE CONTRACTOR SHALL PROTECT ALL EXISTING MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS DURING CONSTRUCTION. ANY DAMAGE TO THE SYSTEMS CAUSED BY THE WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.



ASSOCIATES

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS 3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832 Ph (301) 570-1460

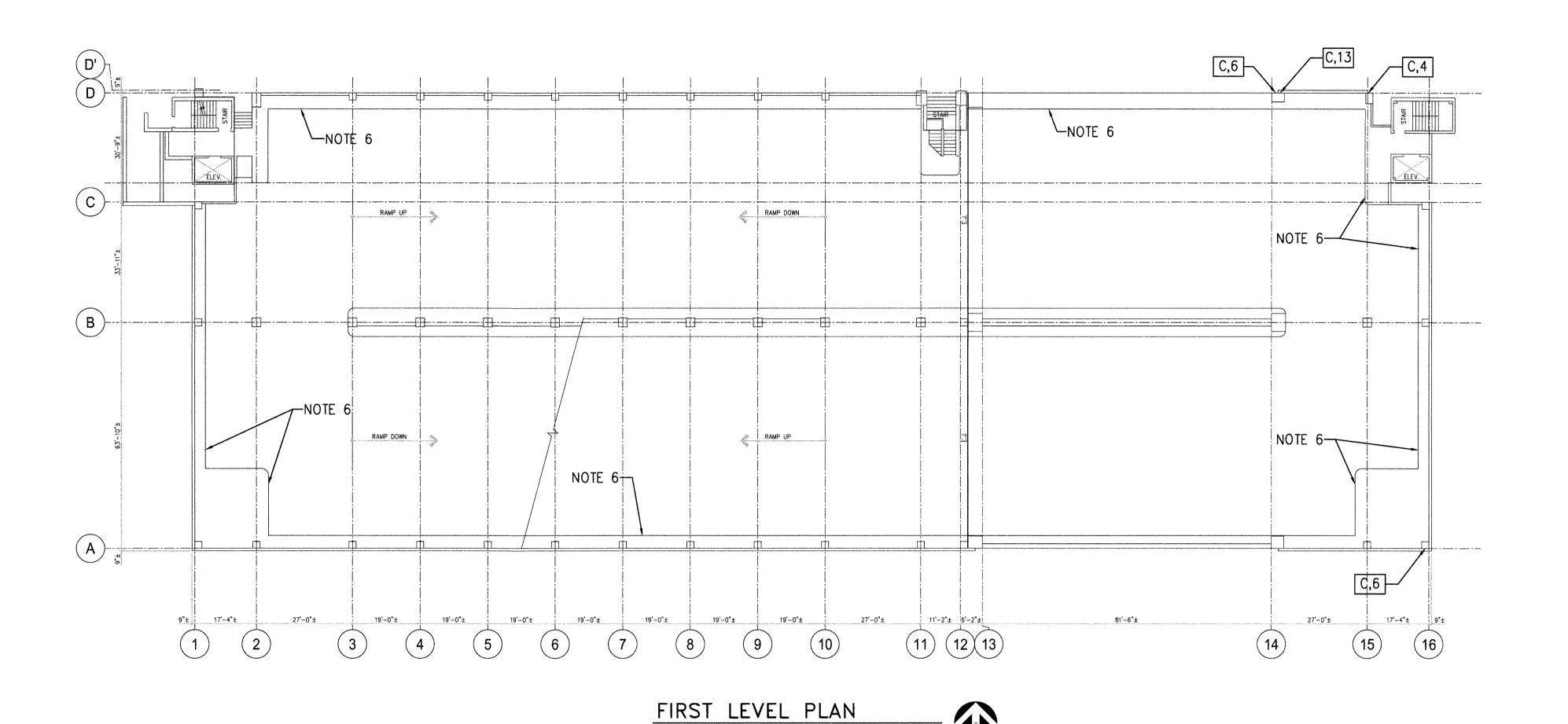
Fax (301) 570-1462

FOR CONSTRUCTION

GENERAL NOTES

15-184 04/08/16

AS NOTED

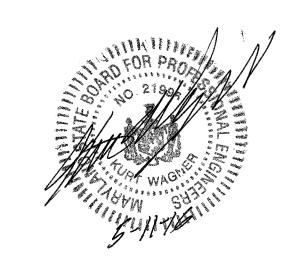


NOTES

- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED
- CONCRETE BEAMS.
- 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS. 3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAÍRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- 4) DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:

REPAIR DETAIL SYMBOL X AREA OF DAMAGE (SQ. FT.) C: COLUMN FACE DAMAGE 7/S-9 AREA OF DAMAGE (SQ. FT.) W: PARTIAL DEPTH WALL DAMAGE 2/S-9 AREA OF DAMAGE (SQ. FT.) 5/S-9 BF: BEAM FACE DAMAGE

- 5) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.
- 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- 7) SEE GENERAL NOTES ON S-0.



HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS

3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

Ph (301) 570-1460 Fax (301) 570-1462

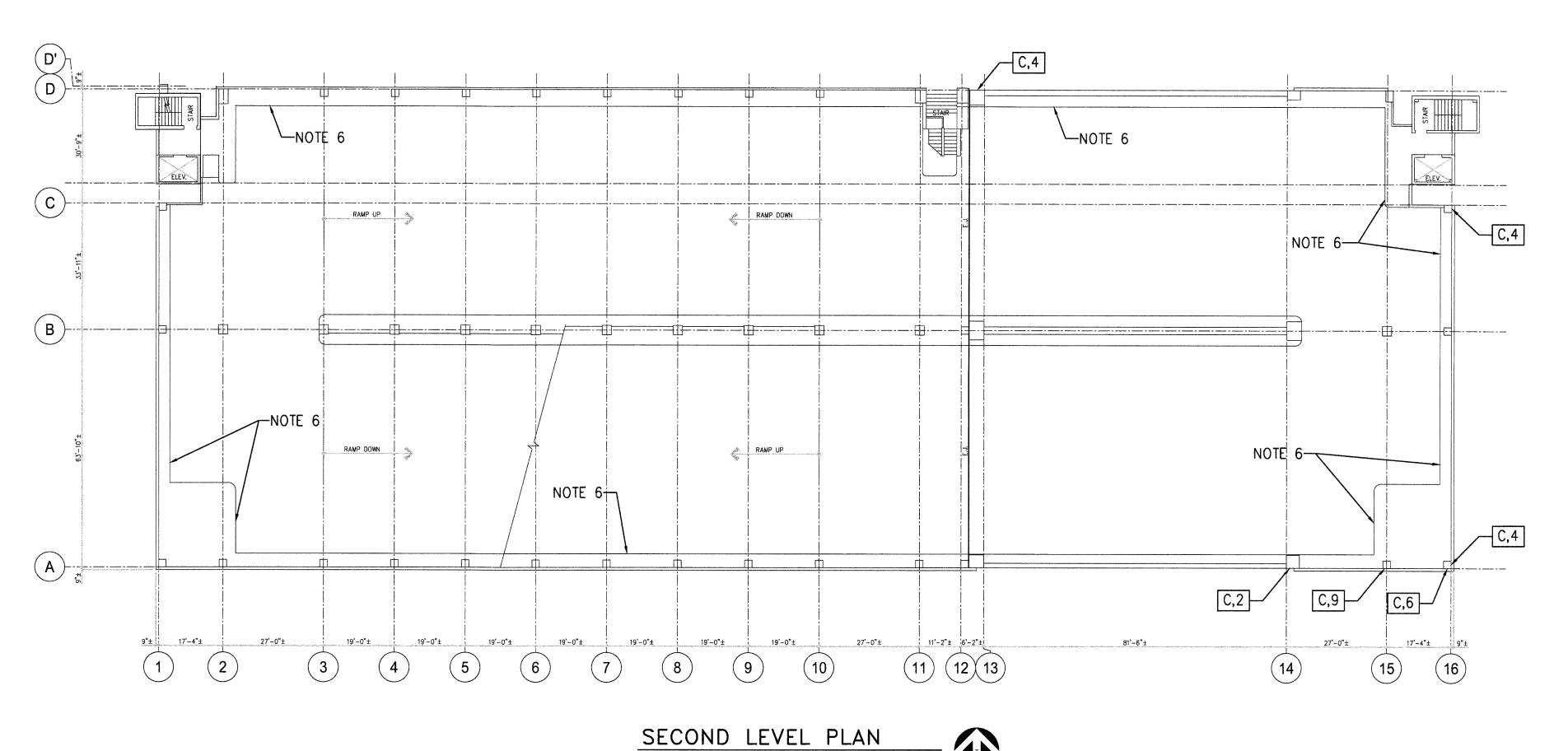
FOR CONSTRUCTION

04/08/16

AS NOTED

FIRST LEVEL

PLAN



- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED CONCRETE BEAMS.
- 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS.
- 3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- 4) DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:

SYMBOL X REPAIR DETAIL AREA OF DAMAGE (SQ. FT.) AREA OF DAMAGE (SQ. FT.)

C: COLUMN FACE DAMAGE 7/S-9 2/S-9 W: PARTIAL DEPTH WALL DAMAGE BF: BEAM FACE DAMAGE AREA OF DAMAGE (SQ. FT.) 5/S-9

- 5) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.
- 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- 7) SEE GENERAL NOTES ON S-0.



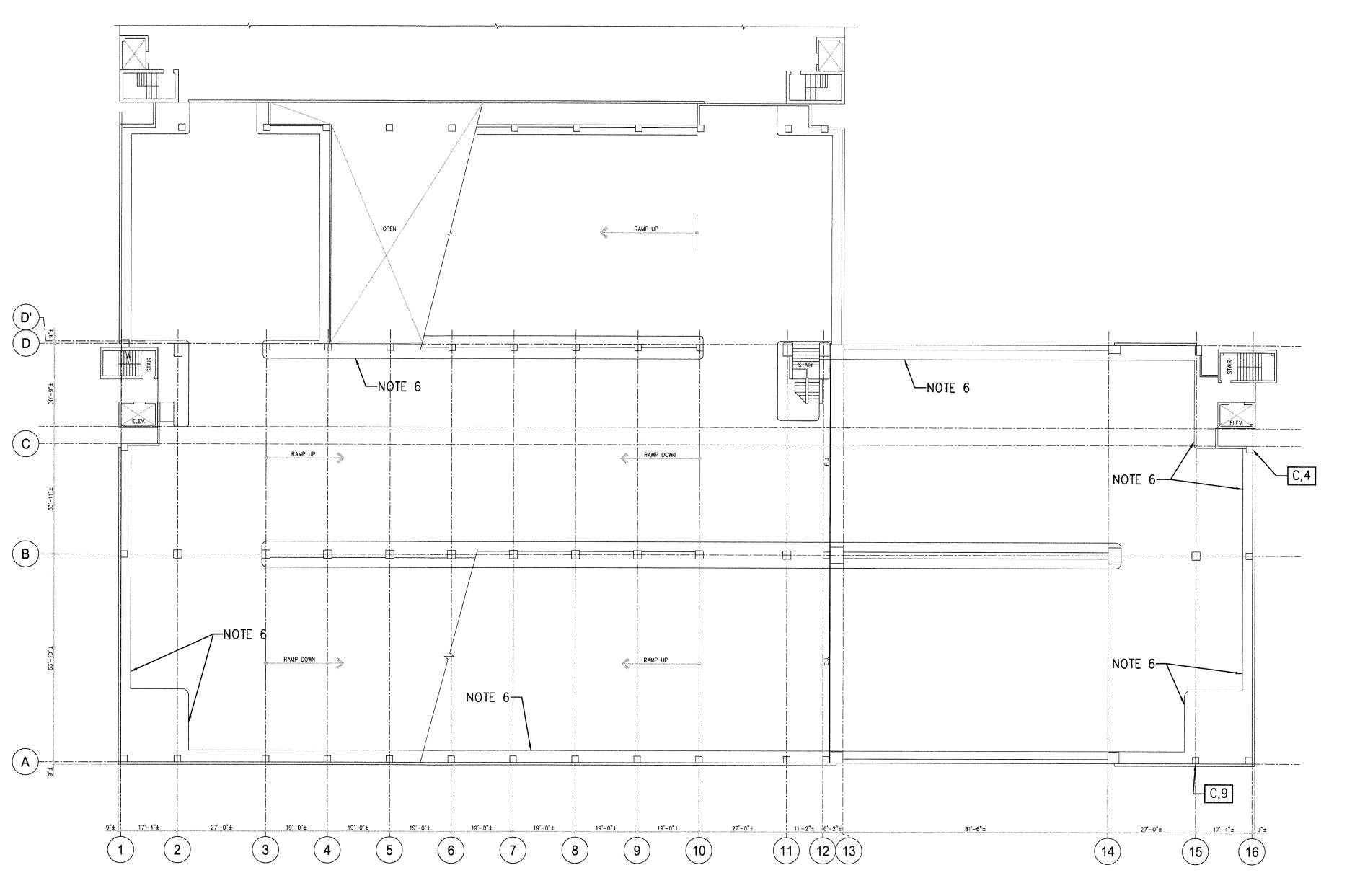
© HOLBERT APPLE ASSOCIATES, INC. 2016

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS 3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832 Ph (301) 570-1460 Fax (301) 570-1462

REVISION FOR CONSTRUCTION 5/11/16 SECOND LEVEL

04/08/16 AS NOTED

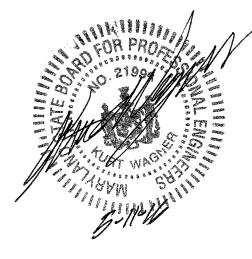
PLAN



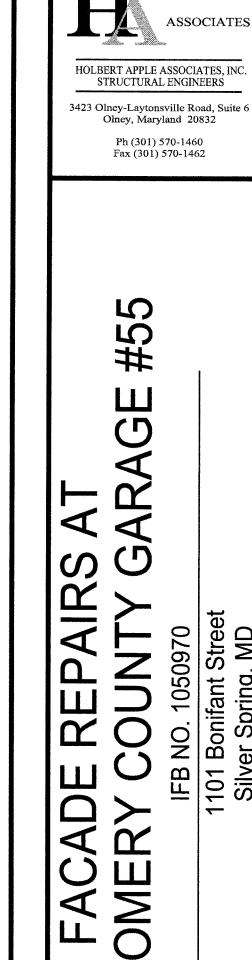
THIRD LEVEL PLAN

NOTES

- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED
- 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS.
- 3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- 4) DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:
- SYMBOL X REPAIR DETAIL AREA OF DAMAGE (SQ. FT.) C: COLUMN FACE DAMAGE 7/S-9
- AREA OF DAMAGE (SQ. FT.) 2/S-9 W: PARTIAL DEPTH WALL DAMAGE
- BF: BEAM FACE DAMAGE AREA OF DAMAGE (SQ. FT.) 5/S-9 5) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE
- FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.
- 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER
- CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- 7) SEE GENERAL NOTES ON S-0.



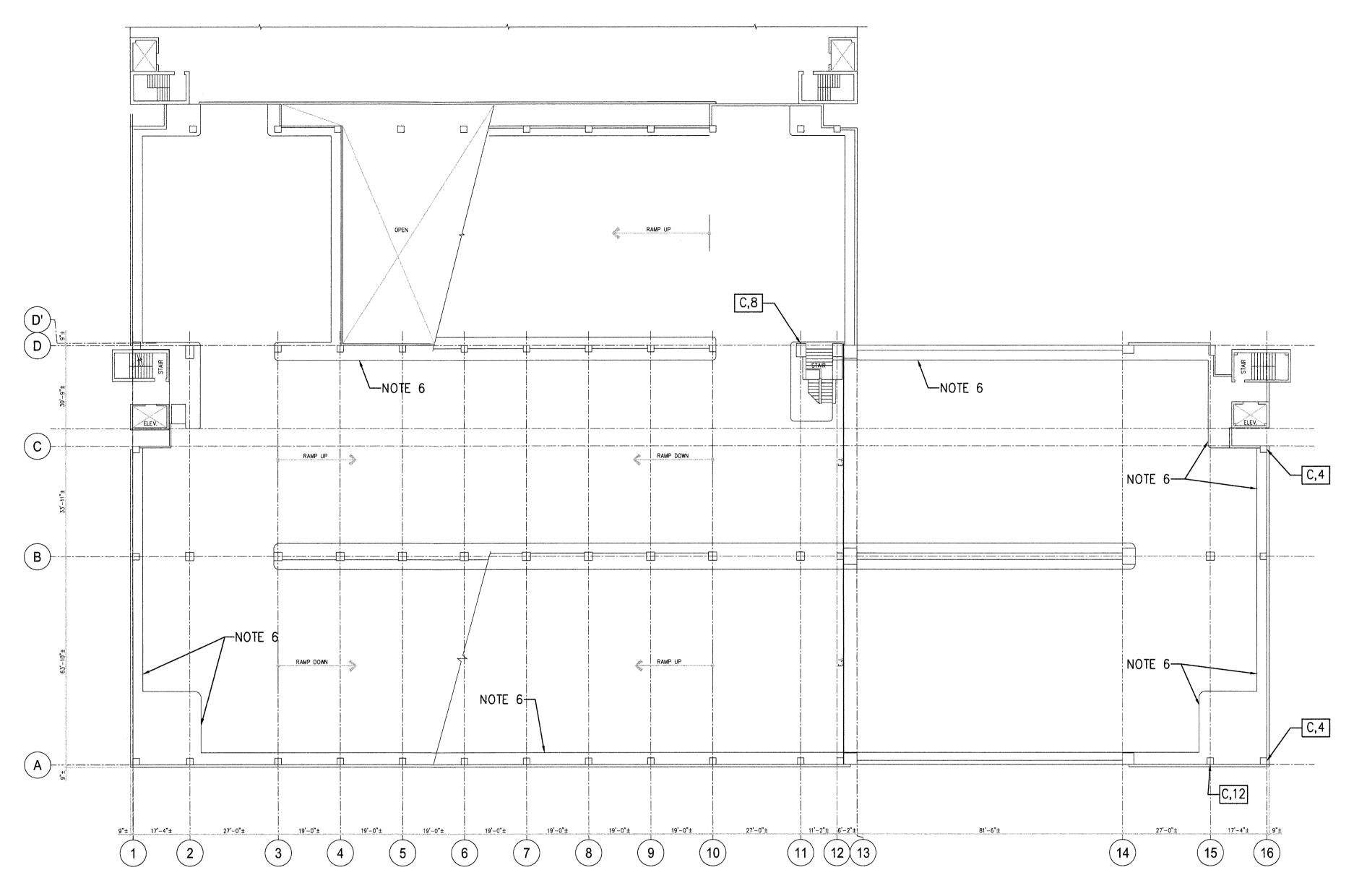
© HOLBERT APPLE ASSOCIATES, INC. 2016



NO.	REVISION	DAT
	FOR CONSTRUCTION	5/11/
SHEET TITL	E:	

THIRD LEVEL PLAN

15-184 S-3 04/08/16 AS NOTED



FOURTH LEVEL PLAN

NOTES

- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED
- CONCRETE BEAMS. 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS.
- 3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- 4) DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:
 - SYMBOL X REPAIR DETAIL AREA OF DAMAGE (SQ. FT.) 7/S-9 C: COLUMN FACE DAMAGE W: PARTIAL DEPTH WALL DAMAGE AREA OF DAMAGE (SQ. FT.) 2/S-9
- BF: BEAM FACE DAMAGE AREA OF DAMAGE (SQ. FT.) 5/S-95) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.
- 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER
- CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- SEE GENERAL NOTES ON S-0.



MONTG

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS

3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

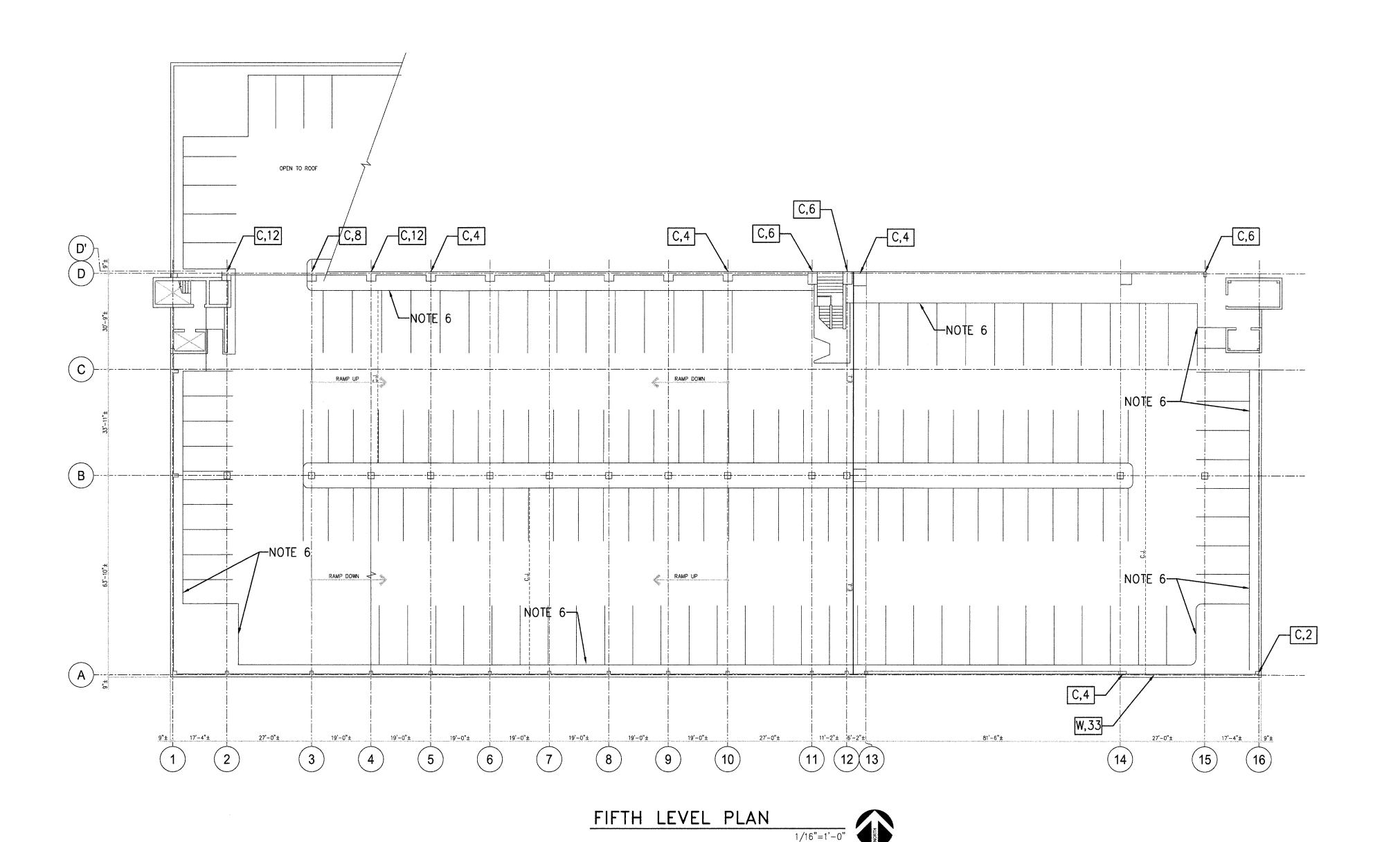
Ph (301) 570-1460 Fax (301) 570-1462

REVISION FOR CONSTRUCTION 5/11/16

FOURTH LEVEL PLAN

15-184 04/08/16

AS NOTED



NOTES

- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED
- CONCRETE BEAMS. 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS.
- 3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- 4) DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:
 - SYMBOL X
 - REPAIR DETAIL 7/S-9 AREA OF DAMAGE (SQ. FT.) C: COLUMN FACE DAMAGE W: PARTIAL DEPTH WALL DAMAGE AREA OF DAMAGE (SQ. FT.) 2/S-9
- BF: BEAM FACE DAMAGE AREA OF DAMAGE (SQ. FT.) 5/S-9 5) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND
- FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE. 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER
- CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- 7) SEE GENERAL NOTES ON S-O.



AGE #55

ASSOCIATES

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS

3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

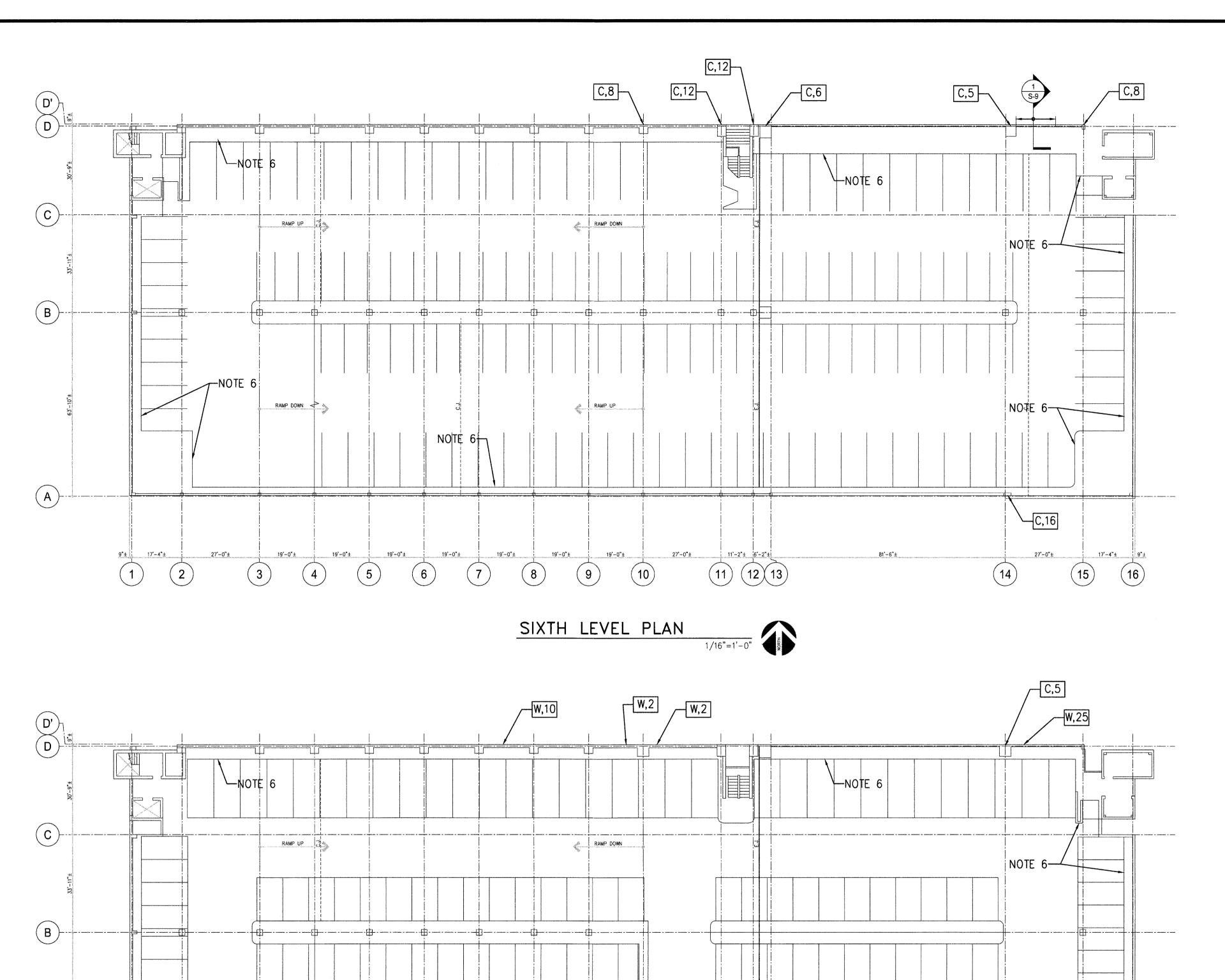
Ph (301) 570-1460 Fax (301) 570-1462

FIFTH LEVEL PLAN

REVISION

FOR CONSTRUCTION

15-184 04/08/16 AS NOTED



RAMP UP

19'-0"±

ROOF PLAN

11 12 13

NOTE 6

A ----

RAMP DOWN

19'-0"± 19'-0"± 19'-0"±

NOTES

NOTE 6

27'-0"± 17'-4"± 9"±

15

W,4

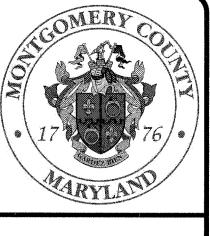
- 1) EXISTING SLAB IS A 5"-7" POST-TENSIONED CONCRETE SLAB SUPPORTED BY POST-TENSIONED CONCRETE BEAMS.
- 2) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS.3) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.
- DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:

SYMBOL X REPAIR DETAIL 7/S-9 2/S-9 C: COLUMN FACE DAMAGE AREA OF DAMAGE (SQ. FT.) W: PARTIAL DEPTH WALL DAMAGE AREA OF DAMAGE (SQ. FT.) AREA OF DAMAGE (SQ. FT.) BF: BEAM FACE DAMAGE 5/S-9

- 5) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.
- 6) AFTER REPAIRS ARE COMPLETED, APPLY AN ELASTOMERIC DECK COATING OVER ALL PERIMETER CURBS. SEE 1/S-9 AND DETAILS ON S-10.
- 7) SEE GENERAL NOTES ON S-0.



© HOLBERT APPLE ASSOCIATES, INC. 2016



ASSOCIATES

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS 3423 Olney-Laytonsvilie Road, Suite 6 Olney, Maryland 20832

Ph (301) 570-1460 Fax (301) 570-1462

45

AIR

AD

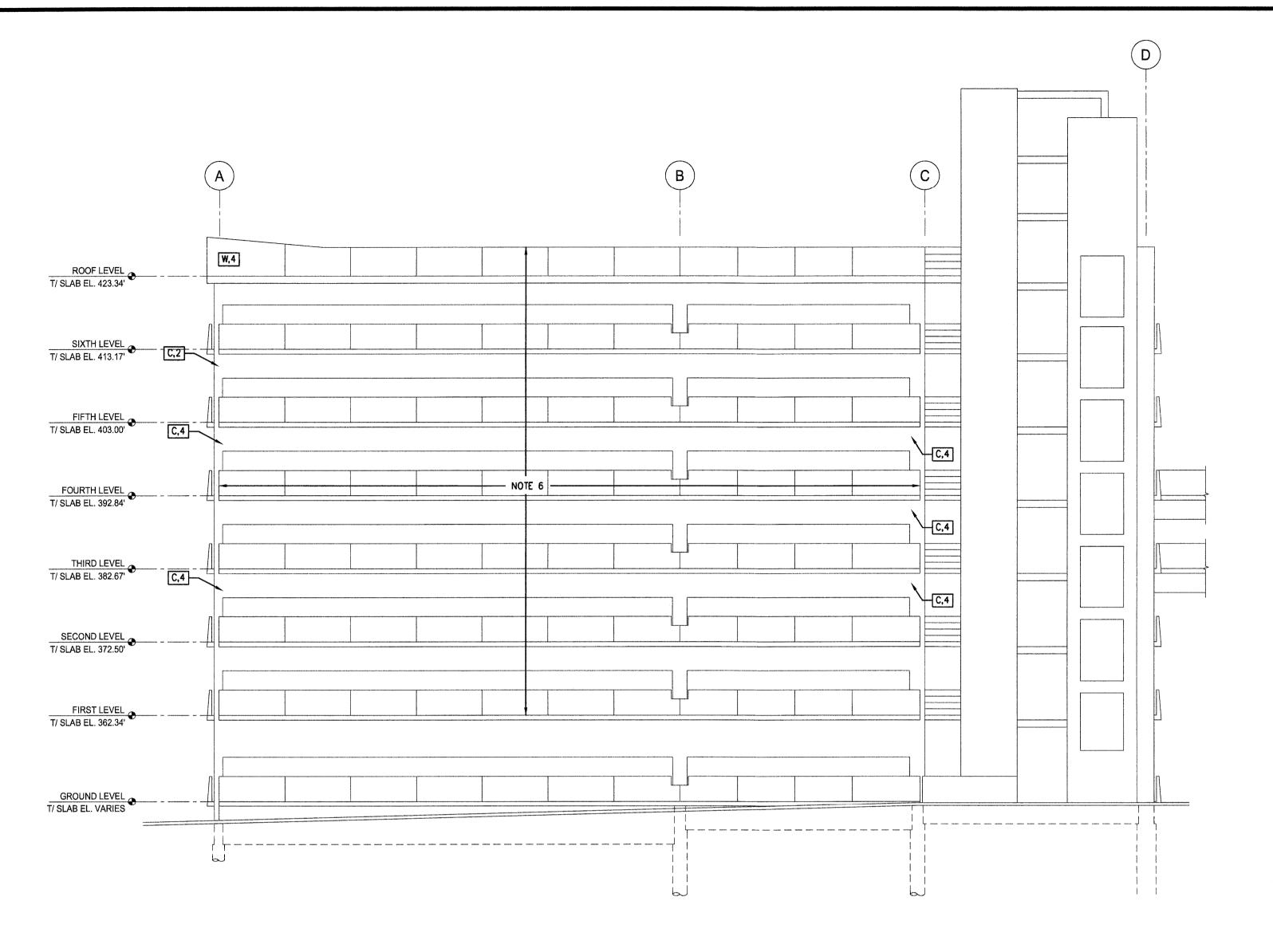
FAC/ MONTGOMEF

NO.	REVISION	DATI
	FOR CONSTRUCTION	5/11/1
·		

SIXTH LEVEL AND **ROOF PLANS**

S-6 04/08/16

AS NOTED



PARTIAL EAST ELEVATION

NOTES

1) EXISTING PERIMETER WALLS ARE CAST-IN-PLACE OR PRECAST CONCRETE WALLS. 2) PRIOR TO BEGINNING REPAIRS, POWER WASH ENTIRE FACADE OF GARAGE (EXTERIOR SURFACES ONLY) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNLESS OTHERWISE NOTED, FOR EXPOSED REPAIRS ON EXTERIOR FACES OF GARAGE, FORMULATE REPAIR CONCRETE TO MATCH EXISTING CONCRETE AS CLOSE AS POSSIBLE.

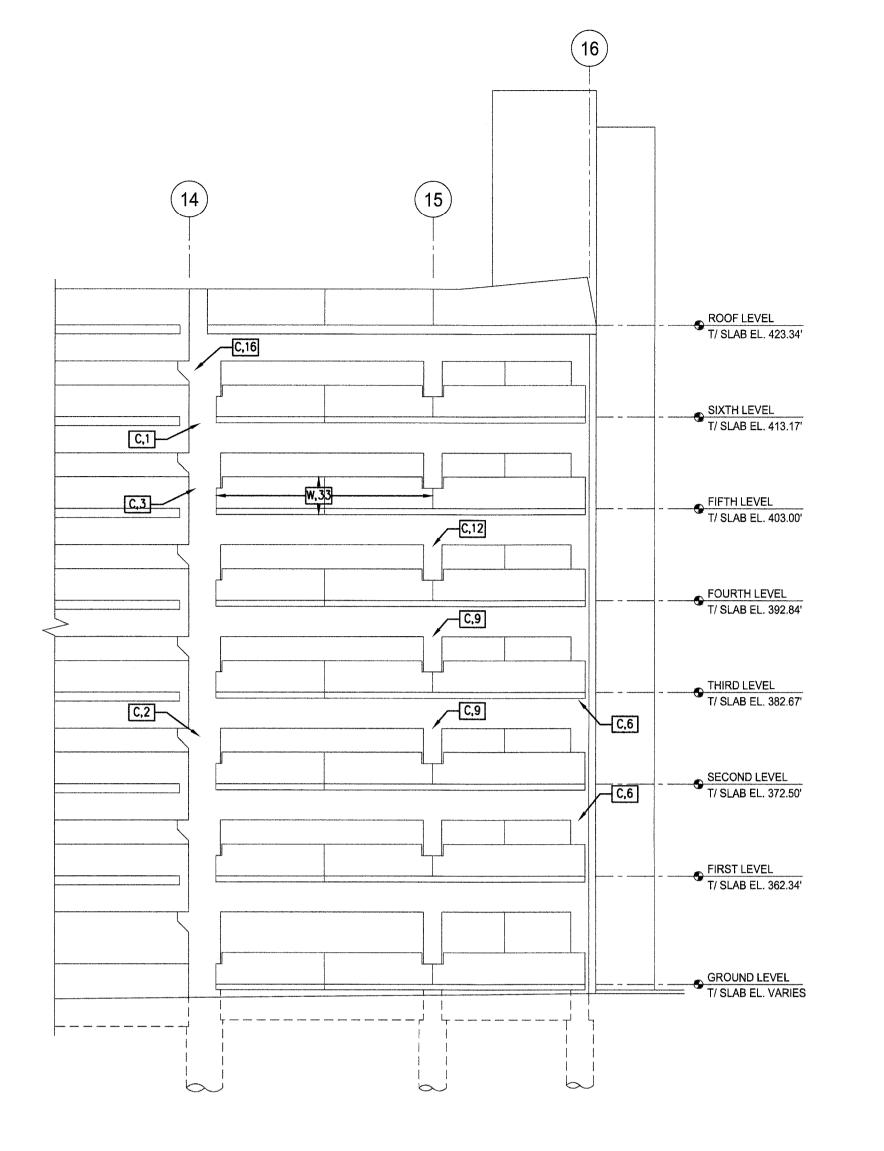
DENOTES CONCRETE DELAMINATION/SPALLING DAMAGE REQUIRING REPAIRS AS FOLLOWS:

REPAIR DETAIL SYMBOL X AREA OF DAMAGE (SQ. FT.) C: COLUMN FACE DAMAGE 7/S-9 AREA OF DAMAGE (SQ. FT.) 2/S-9 W: PARTIAL DEPTH WALL DAMAGE BF: BEAM FACE DAMAGE AREA OF DAMAGE (SQ. FT.)

5/S-9 4) CONCRETE DAMAGE NOTED IS APPROXIMATE BASED ON VISUAL OBSERVATIONS ONLY. PRIOR TO BEGINNING REPAIRS, THE CONTRACTOR SHALL CONDUCT A COMPLETE DAMAGE SURVEY OF THE FACADE USING LIFTS, SWING STAGES, SCAFFOLDING, ETC. TO LOCATE ALL FACADE DAMAGE REQUIRING REPAIRS. THE CONTRACTOR SHALL PROVIDE ACCESS TO THE DAMAGE AREAS FOUND FOR THE STRUCTURAL ENGINEER TO VERIFY THE DAMAGE.

5) SEE GENERAL NOTES ON S-0.

6) REPAIR EXPOSED REINFORCING STEEL ON FACE OF PARAPET WALLS AT EAST ELEVATION USING DETAIL 9/S-9.



2 PARTIAL SOUTH ELEVATION
1/8"=1'-0"



HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS 3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832 Ph (301) 570-1460 Fax (301) 570-1462

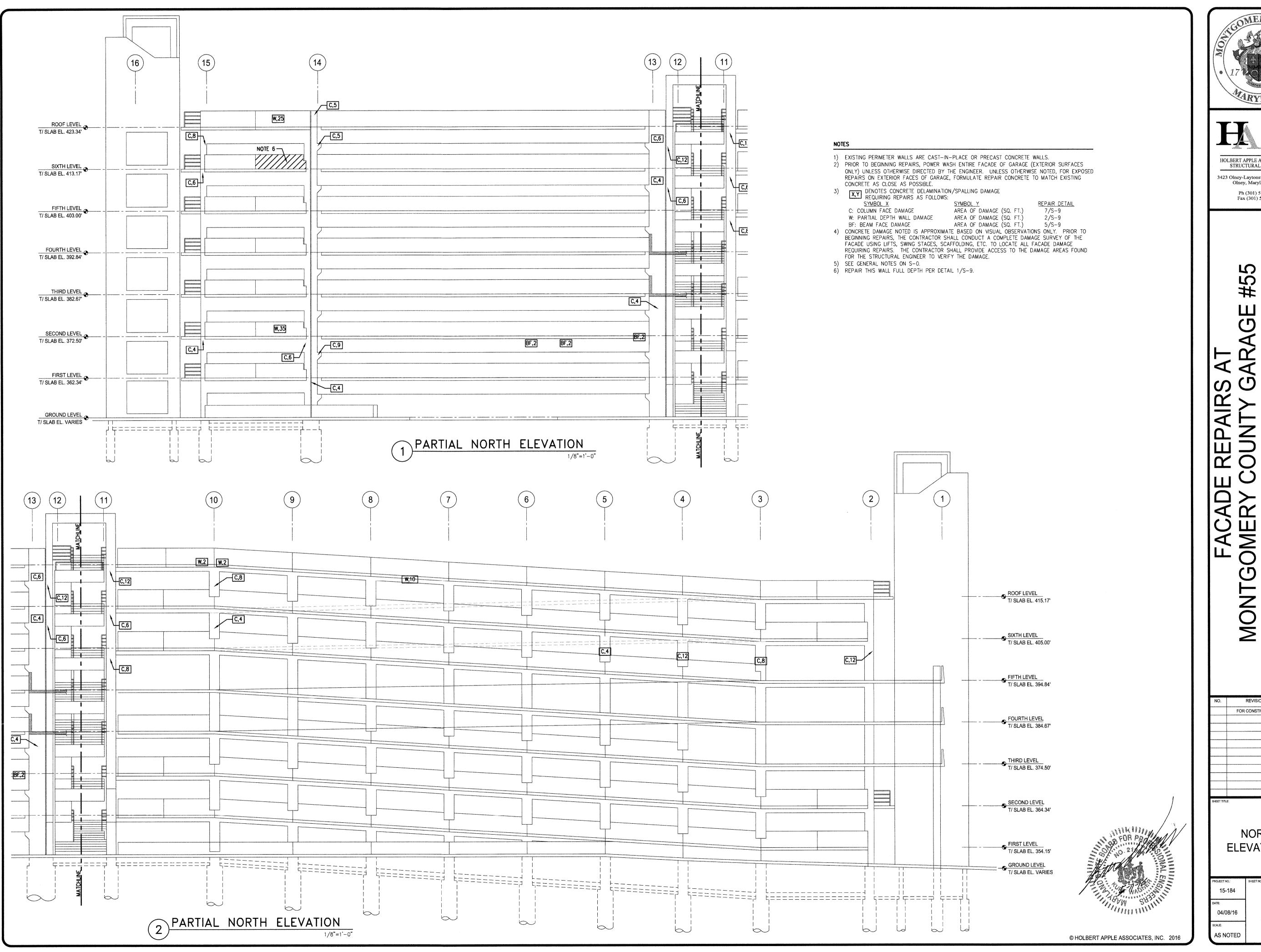
GE AIR

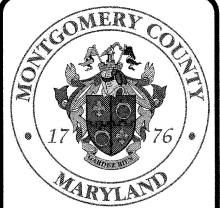
REVISION FOR CONSTRUCTION 5/11/16

PARTIAL SOUTH AND EAST **ELEVATIONS**

AS NOTED

04/08/16





ASSOCIATES

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS

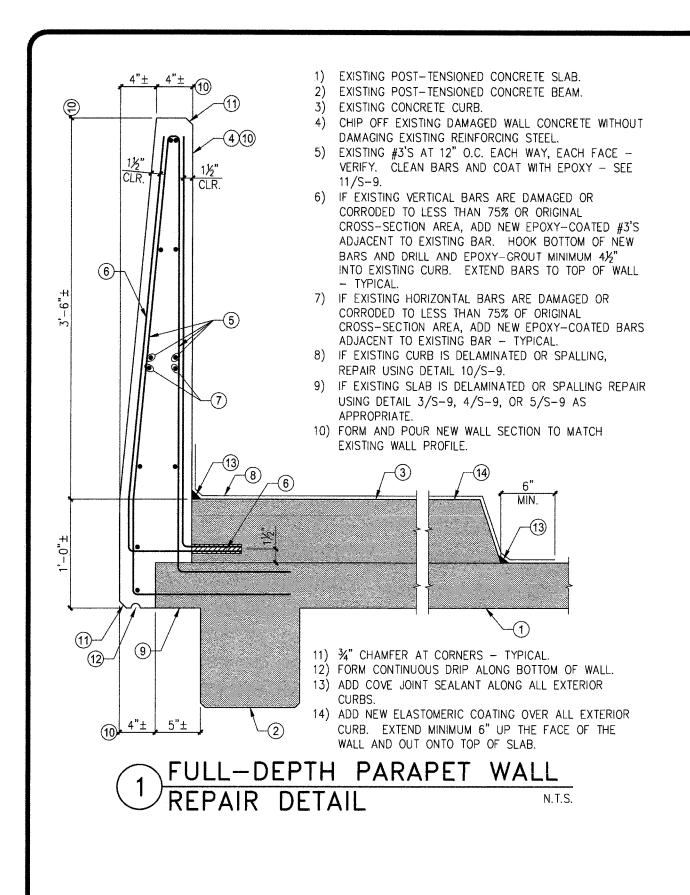
3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

Fax (301) 570-1462

FOR CONSTRUCTION

NORTH **ELEVATIONS**

S-8



1) EXIST. STRUCTURAL WALL 2) EXIST. REINFORCING STEEL 3) REMOVE BEYOND DELAMINATION TO SOUND CONCRETE & MIN. $rac{3}{4}$ " CLEAR BEHIND REINF. BARS. 4) EXIST, CAVITY SURFACE.

5) PATCH TO ORIGINAL SURFACE 6) ½" SAWCUT TYP. AT PATCH PERIMETER.

7) EPOXY COAT ALL EXPOSED REINFORCING STEEL - SEE 11/S-9. 8) REMOVE ANY CONDUIT WITHIN REPAIR AREA UPON APPROVAL FROM OWNER. CAUTION! WIRES IN

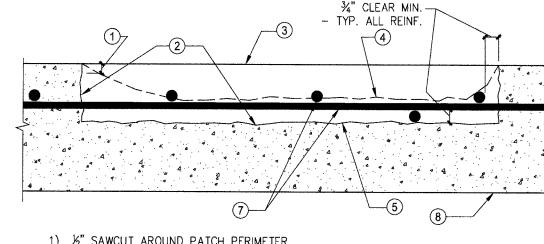
CONDUIT MAY BE LIVE. 9) IF DAMAGE EXTENDS THROUGH WALL, USE DETAIL 1/S-9 SIM. FOR REPAIR.

10) NOT USED. 11) REPLACE HEAVILY CORRODED REINFORCING STEEL AS REQUIRED - SEE 11/S-9.

12) IF THE CONCRETE REMOVAL EXPOSES LESS THAN HALF OF ANY CLEAN EXISTING REINFORCING BAR TO WHICH THE REMAINING CONCRETE IS STILL TIGHTLY BONDED, DO NOT CHIP OUT THE REMAINING CONCRETE AROUND THE BAR - ADD PINS PER DETAIL 8/S-9. 13) PROVIDE SHORING OF SLAB IF AREA OF REPAIR EXCEEDS 5 SQ. FT. OR IF SUM OF INDIVIDUAL REPAIR AREAS

EXCEED 10 SQ. FT. IN ANY 100 SQ. FT. AREA OF THE SLAB. 14) IF EXISTING REBARS AND/OR TENDONS ARE SPACED > 12" O.C., OR > 6" FROM EDGE OF PATCH, DRILL AND EPOXY GROUT #4 EPOXY COATED BARS IN EACH SIDE OF PATCH W/ 16" LAP @ MAX. 12" O.C. OR MAX. 6" FROM EDGE OF PATCH, - TYP, EA. WAY.

PARTIAL DEPTH WALL REPAIR DETAIL



1) 1/2" SAWCUT AROUND PATCH PERIMETER.) REMOVE CONC. TO HORIZ. SURFACE BETWEEN ADJ. BARS OR TENDONS WHEN CAVITY ENCOMPASSES MORE THAN ONE BAR OR TENDON.

3) PATCH TO ORIGINAL SURFACE. 4) EXISTING CAVITY SURFACE.

REMOVE BEYOND DELAMINATION TO SOUND CONC.

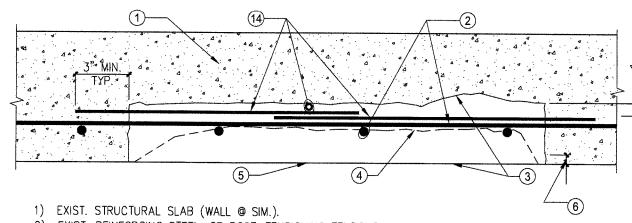
6) PROVIDE SHORING OF SLAB IF AREA OF REPAIR EXCEEDS 5 SQ. FT. OR IF SUM OF INDIVIDUAL REPAIR AREAS EXCEED 10 SQ. FT. IN ANY 100 SQ. FT. AREA OF THE SLAB. EXIST. REINFORCING STEEL OR POST-TENSIONING TENDONS.

8) EXISTING STRUCTURAL SLAB.

9) EPOXY COAT ALL EXPOSED REINFORCING STEEL - SEE 11/S-9. 10) REMOVE ANY CONDUIT ENCOUNTERED WITHIN REPAIR AREA UPON APPROVAL FROM OWNER. CAUTION! WIRES IN CONDUIT MAY BE LIVE.

11) REPLACE HEAVILY CORRODED REINFORCING STEEL AS REQUIRED - SEE 11/S-9. 12) IF THE CONCRETE REMOVAL EXPOSES LESS THAN HALF OF ANY CLEAN EXISTING REINFORCING BAR TO WHICH THE REMAINING CONCRETE IS STILL TIGHTLY BONDED, DO NOT CHIP OUT THE REMAINING CONCRETE AROUND THE BAR. - ADD PINS PER DETAIL 8/S-9.

3 SLAB SURFACE REPAIR DETAIL N.T.S.



2) EXIST. REINFORCING STEEL. OR POST-TENSIONING TENDONS. REMOVE BEYOND DELAMINATION TO SOUND CONCRETE & MIN. 3/4" CLEAR ABOVE REINF. BARS. 4) EXIST. CAVITY SURFACE.

5) PATCH TO ORIGINAL SURFACE.

6) ½" SAWCUT TYP. AT PATCH PERIMETER.

EPOXY COAT ALL EXPOSED REINFORCING STEEL - SEE 11/S-9.

8) REMOVE ANY CONDUIT WITHIN REPAIR AREA UPON APPROVAL FROM OWNER. CAUTION! WIRES IN CONDUIT MAY BE LIVE.

9) DETAIL 5/S-9 MAY BE USED @ NO ADDITIONAL COST TO THE OWNER. 10) NOT USED.

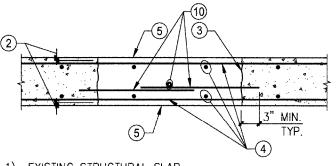
11) REPLACE HEAVILY CORRODED REINFORCING STEEL AS REQUIRED - SEE 11/S-9.

12) IF THE CONCRETE REMOVAL EXPOSES LESS THAN HALF OF ANY CLEAN EXISTING REINFORCING BAR TO WHICH THE REMAINING CONCRETE IS STILL TIGHTLY BONDED, DO NOT CHIP OUT THE REMAINING CONCRETE AROUND THE BAR - ADD PINS PER DETAIL 8/S-9.

13) PROVIDE SHORING OF SLAB IF AREA OF REPAIR EXCEEDS 5 SQ. FT. OR IF SUM OF INDIVIDUAL REPAIR AREAS EXCEED 10 SQ. FT. IN ANY 100 SQ. FT. AREA OF THE SLAB.

14) IF EXISTING REBARS AND/OR TENDONS ARE SPACED > 12" O.C., OR > 6" FROM EDGE OF PATCH, DRILL AND EPOXY GROUT #4 EPOXY COATED BARS IN EACH SIDE OF PATCH W/ 16" LAP @ MAX. 12" O.C. OR MAX. 6" FROM EDGE OF PATCH, - TYP. EA. WAY.

SLAB SOFFIT REPAIR DETAIL (WALL @ SIM.)



1) EXISTING STRUCTURAL SLAB.

AS REQUIRED BY

COVER AND SLOPE

1) ORIGINAL CONCRETE SURFACE.

3) MIN. 34" CLEAR BEHIND BAR.

OF 为"MINIMUM TO ¾"MAXIMUM、

4) MIN. ¾" COVER OVER BAR.

5) REPAIR MATERIAL

2) 1/2" SAWCUT @ PATCH PERIMETER - TYP. TOP AND BOTTOM OF

3) REMOVE DAMAGED CONC. TO SOUND CONC. AND AS REQUIRED AND DIRECTED BY THE ENGINEER. TO EXPOSE ALL REINF. STEEL CORROSION. SIDES OF PATCH SHALL BE VERTICAL OR SLOPED UP MAX. 6V:1H AWAY

4) EXIST. REINFORCING STEEL OR POST-TENSIONING TENDONS -

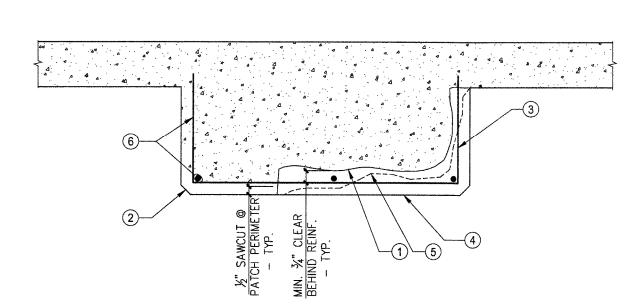
AVOID DAMAGING DURING DEMOLITION. PATCH TO ORIGINAL SURFACE UNLESS NOTED OTHERWISE

6) REPLACE HEAVILY CORRODED REINFORCING STEEL AS REQUIRED -SEE 11/S-9.

7) REMOVE ANY CONDUIT ENCOUNTERED WITHIN REPAIR AREA UPON APPROVAL FROM OWNER. CAUTION! WIRES IN CONDUIT MAY

8) NOT USED. 9) PROVIDE SHORING OF SLAB IF AREA OF REPAIR EXCEEDS 5 SQ. FT. OR IF SUM OF INDIVIDUAL REPAIR AREAS EXCEED 10 SQ. FT. IN ANY 100 SQ. FT. AREA OF THE SLAB.

10) IF EXISTING REBARS AND/OR TENDONS ARE SPACED > 12" O.C., OR > 6" FROM EDGE OF PATCH DRILL AND EPOXY GROUT #4 EPOXY COATED BARS IN EACH SIDE OF PATCH W/ 16" LAP @ MAX. 12" O.C. OR MAX. 6" FROM EDGE OF PATCH. - TYP. EA. WAY. 5 FULL DEPTH SLAB REPAIR DETAIL



1) REMOVE BEYOND DELAMINATION TO SOUND CONCRETE.

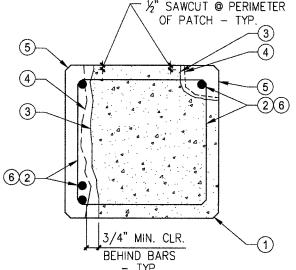
EXISTING CONCRETE BEAM. 3) ABRASIVE BLAST & EPOXY COAT ALL EXPOSED REINF. STL., SEE 11/S-9. REPLACE HEAVILY CORRODED LONGITUDINAL BARS AS NOTED IN 11/S-9. IF STIRRUPS ARE DAMAGED, NOTIFY ENGINEER FOR EVALUATION & POSSIBLE REPLACEMENT DETAIL.

4) PATCH TO ORIGINAL SURFACE. 5) EXIST. CAVITY SURFACE.

EXISTING REINFORCING STEEL.

7) SHORE BEAM IF LENGTH OF ANY REPAIR EXCEEDS 3'-0", IF SUM OF LENGTHS OF INDIVIDUAL REPAIRS EXCEEDS 10% OF BEAM LENGTH, OR IF REPAIRS OCCURS WITHIN 3'-0" OF THE END OF THE BEAM.

\SPALLED/DELAMINATED BEAM REPAIR DETAIL



1) EXISTING CONCRETE COLUMN.

COL. TIES & REINF. (VERIFY LOCATION IN FIELD).

REMOVE BEYOND DELAMINATION TO SOUND CONCRETE.

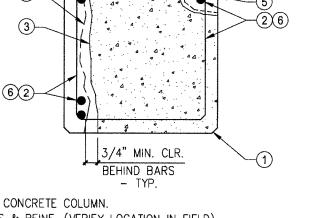
N.T.S.

5) PATCH TO ORIGINAL SURFACE

6) EXPOSED STEEL TO BE ABRASIVE BLASTED & EPOXY COATED

7) IF THE CONCRETE REMOVAL EXPOSES LESS THAN HALF OF ANY CLEAN

8) PROVIDE SHORING TO SUPPORT COLUMN LOADS IF REPAIR CROSS-SECTION AREA EXCEEDS 10% OF COLUMN CROSS-SECTION AREA. JACK STRUCTURE TO REMOVE COLUMN LOADS (DEAD LOADS + 1/2 LIVE LOADS) IF REPAIR CROSS-SECTION AREA EXCEEDS 20% OF COLUMN CROSS-SECTION AREA. LARGE REPAIRS MAY BE PERFORMED IN SMALL INCREMENTS ONLY WITH APPROVAL OF THE ENGINEER.

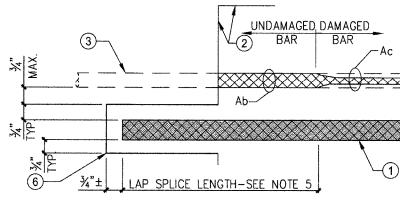


4) EXIST. CAVITY SURFACE.

- SEE 11/S-9 TYP.

EXISTING REINFORCING BAR TO WHICH THE REMAINING CONCRETE IS STILL TIGHTLY BONDED, DO NOT CHIP OUT THE REMAINING CONCRETE AROUND THE BAR, BUT EPOXY-GROUT ALL-THREAD "PINS" INTO FACE OF REPAIR AREA - SEE 8/S-9.





1) ADDITIONAL REINFORCING STEEL, IF REQUIRED - SEE NOTE 5. PERIMETER OF REPAIR AREA.

 EXISTING REINFORCING STEEL. 4) CLEAN EXPOSED REINFORCING STEEL OF CORROSION AND SCALE BY AN OIL-FREE ABRASIVE-BLAST METHOD, THEN COAT WITH EPOXY OR OTHER APPROVED RUST-INHIBITIVE MATERIAL.

5) IF DAMAGED BAR AREA AC IS LESS THAN 75% OF ORIGINAL AREA Ab, ADD ADDITIONAL GRADE 60 REINFORCING STEEL OF AREA AB OR GREATER. AT EACH END OF THE CORRODED AREA, PROVIDE A MINIMUM LAP SPLICE LENGTH OF 44 TIMES THE EXISTING STEEL DIAMETER. IF THE ADDITIONAL STEEL ENCOUNTERS THE END OF THE MEMBER, PROVIDE A HOOK OR MECHANICAL ANCHORAGE CAPABLE OF DEVELOPING THE FULL TENSION CAPACITY OF THE

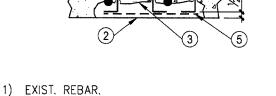
6) IF LAP SPLICE OF ADDITIONAL STEEL EXTENDS BEYOND THE REPAIR AREA PERIMETER, CUT A NOTCH IN THE EXISTING CONCRETE TO PROVIDE A 3/4" CLEAR SPACE BEHIND AND ON EACH SIDE OF THE ADDED STEEL.

CLEANING & EPOXY COATING EXISTING REINFORCING STEEL, IT MAY BE

7) AT CONTRACTORS OPTION, UPON APPROVAL BY ENGINEER, IN LIEU O

REMOVED AND REPLACED WITH EPOXY-COATED REINFORCING HAVING PROPER SPLICE LENGTHS - SEE 12/S-9. 8) AT CONTRACTORS OPTION, OR WHERE ROOM OR ACCESS FOR LAP SPLICE LENGTH IS NOT AVAILABLE, CUT OFF DAMAGED PORTION OF STEEL AND ADD NEW REINFORCING STEEL WITH ENGINEER APPROVED MECHANICAL TENSION

SPLICE COUPLER IN LIEU OF LAP SPLICE DETAIL. EXISTING REINFORCING STEEL PREPARATION DETAIL



2) PROVIDE MIN. 1" THICK PATCH. BUILD OUT SURFACE OF PATCH IF REQUIRED.

FACE OF SOUND EXISTING CONC.

4) DRILL AND EPOXY GROUT 1/4" ALL-THREAD "PINS" A MIN. MIN. 2" 90" HOOK AT END OF EACH PIN.

5) IF PATCH AREA EXCEEDS 2 SQ. FT., ADD GALVANIZED, OR EPOXY-COATED, 4x4 W1.4 x W1.4 WWF REINFORCING.

SHALLOW/SURFACE N. T. S.

TENSION LAP SPLICE (EPOXY-COATED)

			28	B DAY CO	NCRETE DE	ESIGN STR	ENGTH (P:	51)	
		30	00	40	00	50	00	60	00
REINFORCI	NG BAR SIZE	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II	CASE I	CASE II
117	TOP BARS	3'-1"	4'-7"	2'-8"	3'-11"	2'-4"	3'-6"	2'-2"	3'-3"
#3	OTHER BARS	2'-8"	4'-0"	2'-4"	3'-6"	2'-1"	3'-2"	1'-11"	2'-10"
ДΛ	TOP BARS	4'-1"	6'-1"	3'-6"	5'-3"	3'-2"	4'-9"	2'-11"	4'-4"
#4	OTHER BARS	3'-7"	5'-4"	3'-1"	4'-8"	2'-9"	4'-2"	2'-7"	3'-10"
<i>#</i> 5	TOP BARS	5'-1"	7'-7"	4'-5"	6'-7"	3'-11"	5'-11"	3'-7"	5'-4"
#5	OTHER BARS	4'-6"	6'-8"	3'-11"	5'-10"	3'-6"	5'-2"	3'-2"	4'-9"
116	TOP BARS	6'-1"	9'-1"	5'-3"	7'-11"	4'-9"	7'-1"	4'-4"	6'-5"
#6	OTHER BARS	5'-4"	8'-0"	4'-8"	7'-0"	4'-2"	6'-3"	3'-10"	5'-8"
117	TOP BARS	8'-10"	13'-3"	7'-8"	11'-6"	6'-10"	10'-3"	6'-3"	9'-5"
#7	OTHER BARS	7'–10"	11'-8"	6'-9"	10'-2"	6'-1"	9'-1"	5'-6"	8'-3"
ΠÖ	TOP BARS	10'-1"	15'-2"	8'-9"	13'-2"	7'-10"	11'-9"	7'-2"	10'-9"
#8	OTHER BARS	8'-11"	13'-5"	7'-9"	11'-7"	6'-11"	10'-4"	6'-4"	9'-6"
ДΟ.	TOP BARS	11'-5"	17'-1"	9'-11"	14'-10"	8'-10"	13'-3"	8'-1"	12'-1"
#9	OTHER BARS	10'-1"	15'-1"	8'-9"	13'-1"	7'–10"	11'-8"	7'-1"	10'-8"
<i>Ш</i> 1 О	TOP BARS	12'-10"	19'-3"	11'-1"	16'-8"	9'–11"	14'-11"	9'-1"	13'-7"
#10	OTHER BARS	11'-4"	17'-0"	9'-10"	14'-9"	8'-9"	13'-2"	8'-0"	12'-0"
Ш1 1	TOP BARS	14'-3"	21'-4"	12'-4"	18'-6"	11'-1"	16'-7"	10'-1"	15'-1"
#11	OTHER BARS	12'-7"	18'-10"	10'-11"	16'-4"	9'-9"	14'-7"	8'-11"	13'-4"

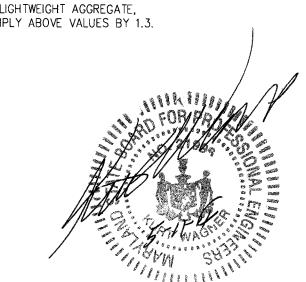
1) THIS DETAIL DOES NOT APPLY TO COLUMN VERTICAL BARS.

2) TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS, 3) CASE 1:

a. BEAMS – CONCRETE COVER \geq db, CENTER-TO-CENTER BAR SPACING ≥ 2 db AND WITH STIRRUPS THROUGHOUT Id NOT LESS THAN THE CODE MINIMUM. b. OTHER ELEMENTS - CONCRETE COVER ≥ d_b AND

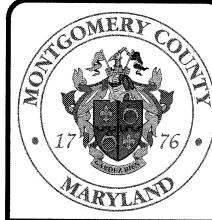
CENTER-TO-CENTER BAR SPACING ≥ 3 dь.

CASE II: ALL OTHER CASES. 4) FOR LIGHTWEIGHT AGGREGATE, MULTIPLY ABOVE VALUES BY 1.3.



TENSION LAP SPLICE LENGTH FOR BEAM, SLAB, WALL AND CONC. JOIST EPOXY-COATED REINF. BARS

© HOLBERT APPLE ASSOCIATES, INC. 2016



ASSOCIATES

HOLBERT APPLE ASSOCIATES INC STRUCTURAL ENGINEERS 3423 Olney-Laytonsville Road, Suite 6

Olney, Maryland 20832 Ph (301) 570-1460

Fax (301) 570-1462

#2 (J

1

D

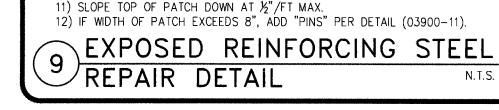
 \geq MONT

REVISION FOR CONSTRUCTION

DETAILS

15-184 04/08/16

AS NOTED



10) APPLY REPAIR MATERIAL PER THE SPECIFICATIONS.

COVER ≥ ¾" UNLESS OTHERWISE DIRECTED BY ENGINEER.

8) CHIP FACE OF EXISTING CONCRETE BETWEEN THE SAWCUTS TO A DEPTH

9) ABRASIVE-BLAST PATCH AREA AND BAR, THEN EPOXY COAT THE BAR.

1) EXISTING STRUCTURAL SLAB. 2) 1/2" SAWCUT AROUND ALL SIDES OF BAR. DO NOT CUT BAR. 2) EXISTING UNDAMAGED CURB TO REMAIN.) EXISTING REINFORCING BARS - VERIFY. 4) CHIP DOWN AT DAMAGE CURB AREA TO LOCATE EXISTING BARS 6) EXPOSED REINFORCING STEEL BAR (POST-TENSIONING TENDON @ "SIM."). THEN SAWCUT PERIMETER OF DAMAGED AREA WITH SAW SET AT DEPTH THAT WON'T DAMAGE EXISTING BARS. 7) EXTEND DETAIL ALONG LENGTH OF BAR UNTIL ORIGINAL CONCRETE

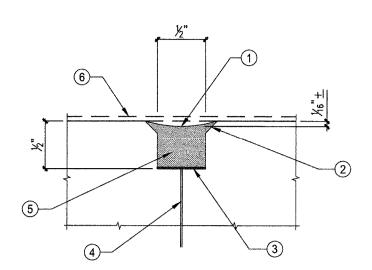
> DAMAGING EXISTING CONCRETE 6) CLEAN AND EPOXY-COAT EXISTING EXPOSED BARS. ADD SUPPLEMENTAL BARS ADJACENT TO DAMAGED BARS - SEE 11/S-9. 7) ABRASIVE BLAST AND CLEAN ALL SURFACES AGAINST WHICH NEW CONCRETE WILL BE PLACED. 8) PLACE NEW CONCRETE TO MATCH ORIGINAL CURB PROFILE.

5) CHIP OUT DELAMINATED CONCRETE TO SOUND CONCRETE WITHOUT

CURB REPAIR DETAIL

N.T.S.

N.T.S.



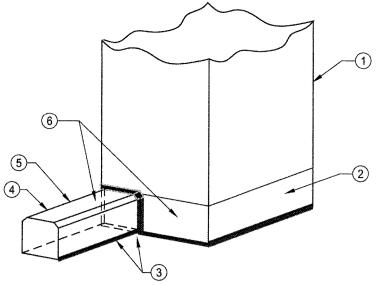
SEALANT - RECESS ⅓₆" BELOW SURFACE, EXCEPT WHERE DECK COATING IS USED, FILL FLUSH WITH SURFACE. DO NOT OVERFILL JOINT.

2) GRIND 1/8" CHAMFER. 3) BOND BREAKER.

4) CONTROL/CONSTRUCTION JOINT OR CRACK > 1/32".

5) ROUTED OR GROUND JT.
6) DECK COATING IF NOTED - SEE 6/S-10.

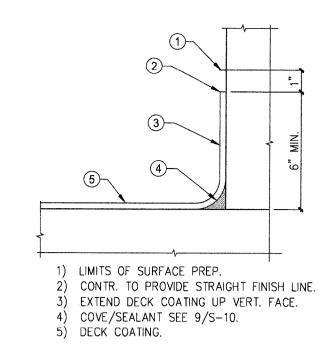
1 ROUT & SEAL DETAIL
AT SLAB
N.T.S.



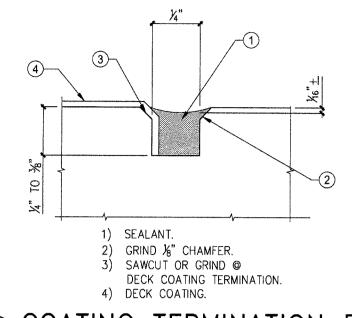
EXISTING COLUMN.
 COATING TERMINATION - SEE DETAIL 3/S-10 SIM.
 COVE SEALANT - SEE DETAIL 9/S-10.

4) EXISTING CURB. 5) TERMINATE COATING AT TOP OF CURB CHAMFER. 6) DECK COATING.

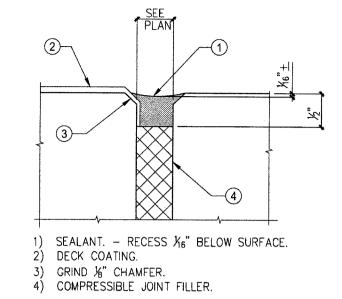
2 SEALANT/COATING DETAIL



COATING TERMINATION DETAIL
AT VERTICAL SURFACES N.T.S.

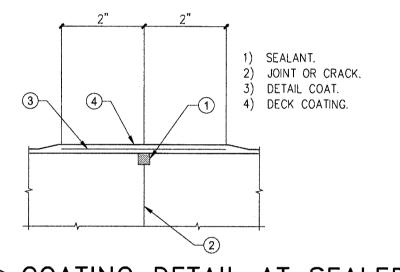


4 COATING TERMINATION DETAIL

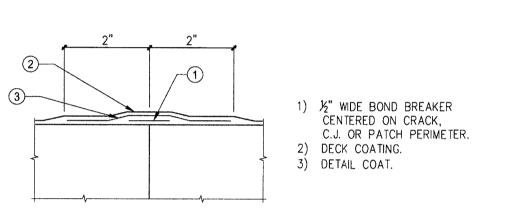


JOINT COATING TERMINATION

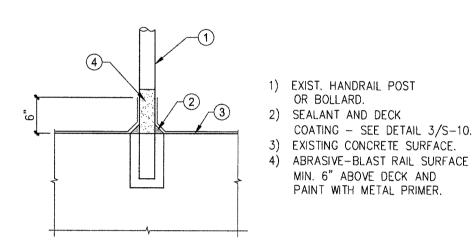
AT FXPANISION 1011



6 COATING DETAIL AT SEALED JOINTS AND CRACKS N.T.S.



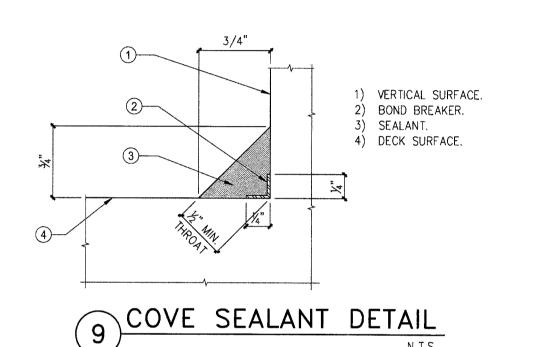
COATING DETAIL AT NON-SEALED CONTROL JOINTS AND CRACKS N.T.S.

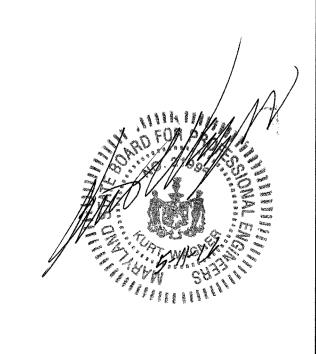


8 COATING DETAIL AT HANDRAIL POSTS AND BOLLARDS N.T.S.

OR BOLLARD.

COATING - SEE DETAIL 3/S-10.





© HOLBERT APPLE ASSOCIATES, INC. 2016



ASSOCIATES

HOLBERT APPLE ASSOCIATES, INC. STRUCTURAL ENGINEERS

3423 Olney-Laytonsville Road, Suite 6 Olney, Maryland 20832

Ph (301) 570-1460

Fax (301) 570-1462

FOR CONSTRUCTIO	N 5/
	1
	DETAIL

04/08/16 AS NOTED