

PARKING GARAGE REPAIRS AT GERRY B. GREEN PLAZA

200 WEST 2ND STREET,
PLAINFIELD, NJ 07063
FOR UNION COUNTY IMPROVEMENT AUTHORITY

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Project Team

OWNER:

Union County
Improvement Authority
10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 07207
T: 732.382.9400

ARCHITECT:

DIGroupArchitecture, LLC
15 Bethany Street
New Brunswick, New Jersey 08901
T: 732.249.6242
F: 732.247.1825

STRUCTURAL & MEP ENGINEER:

Penonni
1900 Market Street, Suite 300
Philadelphia, PA 19103
T: 215.254.7868

Code Recap

NEW JERSEY CURRENT UCC ADOPTED MODEL CODES AND STANDARDS

NJAC 5:23	UNIFORM CONSTRUCTION CODE	
NJAC 5:23-3.14	BUILDING SUBCODE	INTERNATIONAL BUILDING CODE / 2021, NJ ED.
NJAC 5:23-3.15	PLUMBING SUBCODE	NATIONAL STANDARD PLUMBING CODE / 2021, NJ ED.
NJAC 5:23-3.16	ELECTRICAL SUBCODE	NATIONAL ELECTRICAL CODE (NFPA 70) / 2020
NJAC 5:23-3.18	ENERGY SUBCODE	ASHRAE 90.1-2019 (COMMERCIAL & ALL OTHER RESIDENTIAL)
NJAC 5:23-3.20	MECHANICAL SUBCODE	INTERNATIONAL MECHANICAL CODE / 2021
NJAC 5:23-7	BARRIER FREE SUBCODE	ICC A117.1-2017

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION

OCCUPANCY CLASSIFICATION (IBC TABLE 508.3.3) ————— S-2 (LOW HAZARD STORAGE - PARKING GARAGE)

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

TYPE OF CONSTRUCTION: ————— II B
SPRINKLER: ————— NO

EXISTING HEIGHT: ————— 49 FEET
ALLOWABLE BUILDING HEIGHT (TABLE 504.3): ————— 55 FEET (S-2 USE) ok (most restrictive)

EXISTING # OF TIERS: ————— 4 TIERS
ALLOWABLE # OF TIERS (TABLE 406.5.4): ————— 12 TIERS (S-2 USE) ok (most restrictive)

CHAPTER 6: TYPES OF CONSTRUCTION

CONSTRUCTION CLASSIFICATION (IBC 602.5) ————— II B

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601)

PRIMARY STRUCTURAL FRAME	0 HOURS
BEARING WALLS	
EXTERIOR	0 HOURS
INTERIOR	0 HOURS
NONBEARING WALL & PARTITIONS	
EXTERIOR	REFER TO 705.5
INTERIOR	0 HOURS
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY STRUCTURAL MEMBERS	0 HOURS
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY STRUCTURAL MEMBERS	0 HOURS

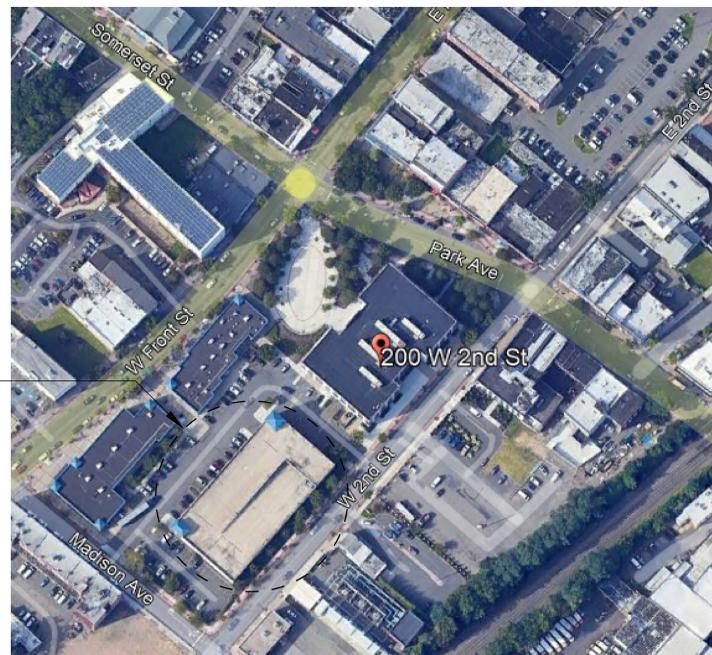
Abbreviations

A.F.F.	ABOVE FINISH FLOOR	L.D.R.	LEADER
ALUM.	ALUMINUM	L.P.	LOW POINT
@	AT	M.H.	MANHOLE
ACOUS.	ACOUSTIC	M.O.	MASONRY OPENING
ALT.	ALTERNATE	MAX.	MAXIMUM
BM.	BEAM	M.E.P.	MECHANICAL, ELECTRICAL & PLUMBING
B.E.J.	BUILDING EXPANSION JOINT	M.E.R.	MECHANICAL EQUIPMENT ROOM
BET.	BETWEEN	MTL.	METAL
BLK.	BLOCK OR BLOCKING	M.F.D.	METAL FLOOR DECK
BD.	BOARD	M.F.T.R.	MANUFACTURER
BOT.	BOTTOM	M.R.D.	METAL ROOF DECK
BLDG.	BUILDING	MISC.	MISCELLANEOUS
B.O.	BOTTOM OF	N.	NORTH
C.B.	COLLECTOR BOX	N.J.P.E.	NEW JERSEY PROFESSIONAL ENGR.
CEM.	CEMENT	N.I.C.	NOT IN CONTRACT
CEM. PLAS.	CEMENT PLASTER	N.T.S.	NOT TO SCALE
C.L.	CENTER LINE	NO.	NUMBER
CONC.	CONCRETE	O.C.	ON CENTER
C.M.U.	CONCRETE MASONRY UNIT	OPNG.	OPENING
CONT.	CONTINUOUS	O.D.	OUTSIDE DIAMETER
CONTR.	CONTRACTOR	O.A.	OVERALL
C.J.	CONTROL JOINT	PART.	PARTITION
COORD.	COORDINATE	PLAS.	PLASTER
CTSK.	COUNTERSUNK	PL.	PLATE
DET.	DETAIL	PNT.	PAINT
DIAM.	DIAMETER	P.T.	PRESSURE TREATED
D.F.	DRINKING FOUNTAIN	PTD.	PAINTED
DR.	DOOR	REV.	REVISION
DN.	DOWN	R.	RISERS
EA.	EACH	R.D.	ROOF DRAIN
EL.	ELEVATION	RM.	ROOM
E.O.S.	EDGE OF SLAB	R.O.	ROUGH OPENING
EXIST.	EXISTING	SECT.	SECTION
EXP. JT.	EXPANSION JOINT	S.P.	STEEL PIPE COLUMN
EXP.	EXPOSED	SPCS.	SPECIFICATIONS
EXT.	EXTERIOR	SQ.	SQUARE
EXTR.	EXTRUDED	SQ. FT.	SQUARE FEET
FT.	FEET	S.S.	STAINLESS STEEL
FIN.	FINISH	ST. STL.	STAINLESS STEEL
FIN. FLR.	FINISH FLOOR	STL.	STEEL
F.G.	FINISH GRADE	STRUCT.	STRUCTURAL
F.E.	FIRE EXTINGUISHER	SUSP.	SUSPENDED
F.P.	FIREPROOFING	T.O.	TOP OF
F.O.	FACE OF	T.O.C.	TOP OF CURB
FL.	FLOOR	T.O.S.	TOP OF SLAB
F.D.	FLOOR DRAIN	T.O. STL.	TOP OF STEEL
F.O.W.	FACE OF WALL	T.	TREADS
FNDTN.	FOUNDATION	T.O.P.	TOP OF PARAPET
GALV.	GALVANIZED	T.O.W.	TOP OF WALL
GA.	GAUGE	TYP.	TYPICAL
G.C.	GENERAL CONTRACTOR	U.L.	UNDERWRITERS LABORATORY
H.R.	HAND RAIL	U.O.N.	UNLESS OTHERWISE NOTED
HDWR.	HARDWARE	VERT.	VERTICAL
H.S.S.	STEEL TUBE BEAM OR COLUMN	V.I.F.	VERIFY IN FIELD
HT.	HEIGHT	W.C.	WATER CLOSET
H.P.	HIGH POINT	W.F.	WIDE FLANGE BEAM OR COLUMN
H.M.	HOLLOW METAL	W.P.	WORK POINT
HOR.	HORIZONTAL	W.PFG.	WATERPROOFING
I.D.	INSIDE DIAMETER	W.M.M.	WELDED WIRE MESH
I.D.F.	INTERMEDIATE DISTRIBUTION FRAME	W/	WITH
INSUL.	INSULATION	WD.	WOOD

Symbols

MATERIAL DESIGNATION			
	GRAVEL OR POROUS FILL		GROUT
	CONCRETE		EARTH
	CONCRETE MASONRY UNITS		PROTECTION BOARD/ GYPSUM BOARD
	BRICK/ CMU VENEER		RIGID INSULATION
	STEEL		PLYWOOD
	NEW PARTITION COORD. WITH PARTITION TYPE		STEEL
DETAILS & ELEVATIONS		WINDOWS & DOORS	
	WALL SECTION		WINDOW/ ALUMINUM FRAME
	BUILDING CROSS SECTION		DOOR TAG (WITH NO AREA)
	EXTERIOR ELEVATION		DOOR TAG (WITH AREA)
	DETAIL	DATUM REFERENCE	
		FLOOR LINE LEVEL OR DATUM EL. 0'-0" (0'-0")	
MISCELLANEOUS			
	INTERIOR ELEVATION		TOILET ACCESSORY BUILT-IN EQUIPMENT
	GENERAL NOTE		D#
MATERIAL KEY NOTES		DOCUMENT REVIEW	
MATERIAL KEY NOTES ARE USED IN LIEU OF STANDARD NOTES IN ORDER TO IMPROVE READABILITY OF DOCUMENTS. MATERIAL KEY NOTES ARE IN CSI FORMAT AND REFER TO SPECIFICATION SECTIONS IN WHICH SPECIFIC MATERIALS APPEAR.		EACH CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL ARCHITECTURAL, CIVIL, STRUCTURAL, HVAC, FIRE PROTECTION, PLUMBING, ELECTRICAL & TECHNOLOGY DRAWINGS. ALL DOCUMENTS CONTAIN INFORMATION WHICH IS COMPLEMENTARY TO EACH TRADE AND MUST BE REVIEWED & UNDERSTOOD PRIOR TO BIDDING THIS PROJECT.	
REFERENCE NOTES		WORK	
NOTES PERTAINING TO SPECIFIC MATERIALS, DIMENSIONS, AND/OR DESCRIPTIONS OF WORK AS THEY RELATE TO THE DRAWINGS ON WHICH THEY APPEAR. ALL REFERENCE NOTES ARE COMPLEMENTARY TO EACH DRAWING AND ARE TO BE CAREFULLY REVIEWED PRIOR TO CONSTRUCTION.		WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH NATIONAL, LOCAL & ALL OTHER APPLICABLE CODES & REQUIREMENTS AS DETERMINED BY AUTHORITIES HAVING JURISDICTION.	

Location Map



0	1/07/2026	ISSUED FOR BIDDING
No.	Date	Description
Revisions / Issues		

DIGroupArchitecture
ARCHITECTURE FOR CHANGE

15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
2450 W Hunting Park Ave., Bldg 9 • Philadelphia, PA 19129-1302 • T: 215.624.3600

Vincent A. Myers, AIA
NJ RA AI 11415

DO NOT SCALE. DRAWING MAY BE PRINTED AT REDUCED SCALE. CONSULT WITH ARCHITECT FOR DIMENSIONS.

Client:
UNION COUNTY IMPROVEMENT AUTHORITY
10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 07207

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Block 246 | Lot 1
200 West 2nd Street
Plainfield, NJ 07063

Drawing Information:
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Sheet Name:
COVER SHEET

Sheet No:

A-00
Sheet 1 of 59

011000 SUMMARY

THE OWNER WILL AWARD A CONSTRUCTION CONTRACT FOR THE PROJECT TO COMPLETE ALL WORK AS INDICATED AND SPECIFIED. THE CONTRACTOR AGREES TO ACCEPT THE PARKING-DECK-BUILDING AND SITE AS THEY EXIST AND TO REMOVE ANY ENCUMBRANCES WHICH INTERFERE WITH THE PROPER FULFILLMENT OF THE CONTRACT WORK. THE CONTRACTOR SHALL MAINTAIN ALL SYSTEMS IN WORKING ORDER, MAINTAIN APPROPRIATE MEANS OF EGRESS, AND MAINTAIN THE CONSTRUCTION SITE IN AN ORDERLY MANNER. HOUSEKEEPING PROCEDURES SHALL BE MAINTAINED ON A DAILY BASIS TO MINIMIZE THE INTRUSION AND SPREAD OF DUST AND CONSTRUCTION DEBRIS INTO AND OUT OF THE PARKING-DECK-BUILDING ENVIRONMENT. ALL CONSTRUCTION WORKERS ON THE SITE MUST WEAR VISIBLE IDENTIFICATION ON THEIR PERSON AT ALL TIMES; MAINTAIN AN ALCOHOL, DRUG AND SMOKE FREE ENVIRONMENT, REFRAIN FROM FRATERINIZING WITH STAFF AND REFRAIN FROM OBJECTIONABLE OR OBNOXIOUS LANGUAGE OR BEHAVIOR. VIOLATORS WILL BE DISCHARGED FROM THE PROJECT SITE.

PROJECT OBJECTIVES

IT IS THE INTENT OF THE OWNER TO IMPLEMENT THE RENOVATIONS DOCUMENTED HEREIN WITHOUT INTERRUPTION TO THE PARKING-DECK-BUILDING OPERATION AND WITHOUT SACRIFICE OF STAFF OR VISITOR SAFETY. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION IN THE SHORTEST PERIOD OF TIME AND SHALL PLAN THE WORK, OBTAIN MATERIALS, AND EXECUTE THE CONSTRUCTION IN THE MOST EXPEDITIOUS MANNER POSSIBLE IN ACCORDANCE WITH THE REQUIREMENTS LISTED BELOW. THE CONTRACTOR WILL BE RESPONSIBLE TO POST WARNING SIGNS INDICATING SAFETY REQUIREMENTS, SUCH AS AT EXISTING EXIT DOORS THAT ARE NOT TO BE USED OR ARE TO BE USED FOR EMERGENCY ACCESS ONLY. THE CONTRACTOR SHALL MAINTAIN ALL SYSTEMS IN WORKING ORDER, MAINTAIN APPROPRIATE MEANS OF EGRESS, AND MAINTAIN THE CONSTRUCTION SITE IN AN ORDERLY MANNER. HOUSEKEEPING PROCEDURES SHALL BE MAINTAINED ON A DAILY BASIS TO MINIMIZE THE INTRUSION AND SPREAD OF DUST AND CONSTRUCTION DEBRIS INTO AND OUT OF THE PARKING-DECK-BUILDING ENVIRONMENT. ALL CONSTRUCTION WORKERS ON THE SITE MUST WEAR VISIBLE IDENTIFICATION ON THEIR PERSON AT ALL TIMES; MAINTAIN AN ALCOHOL, DRUG AND SMOKE FREE ENVIRONMENT, REFRAIN FROM FRATERINIZING WITH STAFF AND REFRAIN FROM OBJECTIONABLE OR OBNOXIOUS LANGUAGE OR BEHAVIOR. VIOLATORS WILL BE DISCHARGED FROM THE PROJECT SITE.

SCHEDULE

ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACTOR/OWNER AGREED UPON SCHEDULE IN BUSINESS HOURS, OR WITH THE OWNER'S PRIOR CONSENT. ALL CONSTRUCTION MUST BE COMPLETED, INCLUDING CERTIFICATE(S) OF APPROVAL AND/OR COMPLETION, TO PERMIT THE OWNER'S UNLIMITED USE OF ALL NEW AND RENOVATED FACILITIES BY THE DATE TO BE ESTABLISHED BASED ON A CONTRACTOR/OWNER AGREED UPON SCHEDULE OR BEFORE.

ALL COSTS REQUIRED BY THE CONTRACTOR TO PERFORM THE WORK THAT IS REQUIRED TO COMPLY WITH THE AGREED COMPLETION DATE ON THE CONSTRUCTION SCHEDULE ARE TO BE INCLUDED IN THE CONTRACTOR'S BASE BID, INCLUDING TAXES, FEES AND PERMITS. ADDITIONAL CONTRACTOR COSTS RELATED TO THE USE OF OVERTIME OR ADDITIONAL PERSONNEL NECESSARY TO COMPLETE THE WORK WITHIN THE STATED COMPLETION TIME WILL NOT BE CONSIDERED AFTER AWARD OF CONTRACT.

LOCATION OF TRAILERS, STORAGE AREAS, PARKING AREAS, AND STAGING AREAS SHALL BE COORDINATED WITH THE OWNER AND THE ARCHITECT. THE WORK UNDER THE CONTRACT MUST BE PERFORMED WHILE THE PARKING-DECK-BUILDING IS IN FULL OPERATION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CAREFULLY INTERFACE ALL CONSTRUCTION OPERATIONS UNTIL THEY REACH THEIR FINAL COMPLETION, SO THAT THE OWNER'S PROGRAMS AND SERVICES CAN BE CARRIED ON WITHOUT INTERRUPTIONS, AND SO THAT A SMOOTH FLOW OF ALL OPERATIONS BY ALL INVOLVED TRADES WILL BE ACHIEVED WITHIN THE SCHEDULED TIME. IT WILL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY COORDINATE CONSTRUCTION ACTIVITIES SO AS TO MAINTAIN ALL EXISTING REQUIRED EXITS, SERVICES, AND SYSTEMS IN FULL OPERATION UNTIL NEW EXITS, SERVICES, AND SYSTEMS CAN BE PLACED IN OPERATION. IMMEDIATELY UPON THE RECEIPT OF A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR SHALL ORGANIZE THE WORK, PREPARE A DETAILED CONSTRUCTION SCHEDULE, PROVIDE ALL REQUIRED SUBMITTALS IN ACCORDANCE WITH THE SHOP DRAWINGS, PRODUCT DATA AND SAMPLE SCHEDULE SO THAT ALL MATERIALS THAT ARE SUBJECT TO APPROVAL MAY BE ORDERED, AND SHALL EXPEDITE LONG-LEAD ITEMS. IF REQUESTED BY THE OWNER OR ARCHITECT, THE CONTRACTOR SHALL PROVIDE PROOF OF ORDERS AND DELIVERY DATES. IF IT APPEARS THAT SOME OF THE WORK CANNOT BE COMPLETED BY THE SCHEDULED DATES, THE CONTRACTOR SHALL INCREASE THE WORK FORCE OR INCREASE THE HOURS OF WORK, INCLUDING EVENINGS AND WEEKENDS IF NECESSARY, AT NO ADDITIONAL COST TO THE OWNER. IF THE CONTRACTOR FAILS TO STAFF THE JOB ADEQUATELY TO MEET THE COMPLETION DATE, THE OWNER RESERVES THE RIGHT TO ASSUME POSSESSION OF THE MATERIAL AND COMPLETE THE INSTALLATION WITH THE OWNER'S FORCES OR OTHER CONTRACTORS AND DEDUCT THE COSTS FROM THE CONTRACT AMOUNT OR TO INQUIRE THE CONTRACTOR TO WORK ADDITIONAL SHIFTS AS NECESSARY. IF THE WORK IS COMPLETE, BUT THE AREA IS NOT CLEANED AND DEBRIS OR EQUIPMENT IS NOT REMOVED, THE OWNER SHALL HAVE THE RIGHT TO HAVE THE AREA PREPARED FOR OCCUPANCY WITH HIS OWN OR OTHER FORCES AND DEDUCT THE COSTS FROM THE CONTRACT AMOUNT.

CONTRACT

THE OWNER WILL AWARD A LUMP SUM CONTRACT FOR THE PROJECT TO COMPLETE ALL WORK AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS.

ALL WORK ASSOCIATED WITH THIS PROJECT IS INDICATED ON THE DRAWINGS AND SPECIFICATIONS AND SHALL BE REGARDED AS THE COMPLETE SCOPE OF WORK.

THE GENERAL CONTRACTOR AGREES TO ACCEPT THE SITE AS IT EXISTS AND TO REMOVE ANY ENCUMBRANCES WHICH INTERFERE WITH THE PROPER FULFILLMENT OF THE WORK WITHOUT CHANGE IN THE CONTRACT SUM.

IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

IN THE CASE OF INCONSISTENCIES BETWEEN DRAWINGS WHERE QUALITY AND QUANTITY ARE NOT IN CONFLICT, THE SCOPE OF WORK INDICATED BY THE LARGER-SCALED DRAWING SHALL TAKE PRECEDENCE OVER CONFLICTING INFORMATION SHOWN IN A SMALLER SCALED DRAWING.

SAFETY

REFERENCE STANDARDS: COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND CODES, WHERE THESE STANDARDS CONFLICT WITH OTHER SPECIFIED REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN.

ALL STATE AND LOCAL CODES AND REGULATIONS REGARDING SAFETY.

PART 1910 - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARD.

PART 1926 - OSHA SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.

NO MATERIALS OR TOOLS SHALL BE PLACED OR STORED IN THE PARKING-DECK-BUILDING. NO DEBRIS SHALL BE LEFT, PLACED OR STORED IN THE PARKING-DECK-BUILDING. ALL DEBRIS SHALL BE CLEANED OUT OF THE PARKING-DECK-BUILDING AT THE END OF EACH WORKING DAY. ALL COMBUSTIBLE MATERIALS SHALL BE STORED IN A SAFE MANNER OUTSIDE THE PARKING-DECK-BUILDING.

013100 CONTRACTORS REQUEST FOR INFORMATION:

CONTRACTORS REQUESTS FOR INFORMATION FROM RFIS SHALL BE SUBMITTED ON A FORM PREPARED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT, WHICH SHALL INCLUDE THE FOLLOWING ITEMS:

DATE OF RFI

RFI NUMBER

TO (INCLUDING NAME, ADDRESS, PHONE AND FAX NUMBERS OF RECIPIENT) FROM (INCLUDING NAME, ADDRESS, PHONE AND FAX NUMBERS OF SENDER)

PROJECT NAME

ARCHITECT'S PROJECT NUMBER

LATEST DATE RESPONSE IS REQUIRED BY SENDER.

CLARIFY ANY DESCRIPTION OF INFORMATION REQUIRED.

A SPACE FOR THE RECIPIENT TO INDICATE IF A POTENTIAL COST / TIME CHANGE IS ANTICIPATED. CONTRACTOR'S PROPOSED SOLUTION OR RECOMMENDATION.

A SPACE FOR THE RECIPIENT TO RECORD THE RESPONSE DATE.

A SPACE FOR THE RECIPIENT TO RECORD THE RESPONDENT'S NAME.

A SPACE FOR THE RECIPIENT TO RECORD THE RESPONSE.

SUBMITTAL OF RFIS BY CONTRACTOR

A PROPERLY PREPARED REQUEST FOR INFORMATION SHALL INCLUDE A DETAILED WRITTEN STATEMENT THAT INDICATES THE SPECIFIC DRAWINGS OR SPECIFICATION SECTION IN NEED OF CLARIFICATION AND THE NATURE OF THE CLARIFICATION REQUESTED.

FORMS SHALL BE COMPLETELY FILLED IN, AND IF PREPARED BY HAND, SHALL BE FULLY LEGIBLE AFTER PHOTOCOPIING OR TRANSMISSION BY FACSIMILE (FAX).

DRAWINGS SHALL BE REFERENCED BY NUMBER AND LOCATION ON THE DRAWING SHEET.

RFIS MAY BE SUBMITTED BY E-MAIL, OR REGULAR MAIL, E-MAIL ADDRESSES WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL USE ONLY ONE (1) TRANSMISSION METHOD: E-MAIL, OR REGULAR MAIL. FOR EACH RFI; FOLLOW-UPS IN ANOTHER FORM SHALL NOT BE SENT.

WHEN THE CONTRACTOR IS UNABLE TO DETERMINE FROM THE CONTRACT DOCUMENTS, THE MATERIAL, PROCESS OR SYSTEM TO BE INSTALLED, THE ARCHITECT SHALL BE REQUESTED TO MAKE A CLARIFICATION OF THE INDETERMINATE ITEM.

ARCHITECT'S PROCESSING OF RFIS

THE ARCHITECT WILL REQUIRE A MINIMUM OF FIVE (5) WORKING DAYS FROM ARCHITECT'S RECEIPT TO RESPOND TO THE RFI.

013300 SUBMITTALS

REQUIREMENTS FOR THE SUBMITTAL SCHEDULE AND ADMINISTRATIVE AND PROCEDURAL REQUIREMENTS FOR SUBMITTING SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER SUBMITTALS TO INSURE THAT THE SPECIFIED PRODUCTS ARE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LAW AND DESIGN INTENT.

PRODUCT DATA: COLLECT INFORMATION INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION AND TYPE OF PRODUCT OR EQUIPMENT.

INCLUDE THE FOLLOWING INFORMATION, AS APPLICABLE:

MANUFACTURER'S CATALOG CUTS.

MANUFACTURER'S PRODUCT SPECIFICATIONS.

STANDARD COLOR CHARTS.

STATEMENT OF COMPLIANCE WITH SPECIFIED REFERENCED STANDARDS.

TESTING BY RECOGNIZED TESTING AGENCY.

APPLICATION OF TESTING AGENCY LABELS AND SEALS.

NOTATION OF COORDINATION REQUIREMENTS.

AVAILABILITY AND DELIVERY TIME INFORMATION.

FOR EQUIPMENT, INCLUDE THE FOLLOWING IN ADDITION TO THE ABOVE, AS APPLICABLE: WIRING DIAGRAMS SHOWING FACTORY-INSTALLED WIRING.

PRINTED PERFORMANCE CURVES.

OPERATIONAL RANGE DIAGRAMS.

CLEARANCES REQUIRED TO OTHER CONSTRUCTION, IF NOT INDICATED ON ACCOMPANYING SHOP DRAWINGS.

CONTRACTOR SHALL ASSUME THAT THE ARCHITECT WILL REQUIRE 7 WORKING DAYS FOR REVIEW OF SUBMITTALS. IF SUBMITTALS NEED TO BE EXPEDITED FOR THE CONTRACTOR'S PURPOSES, THEN THE ARCHITECT'S OVERTIME EXPENSES WILL BE BILLED TO THE OWNER. THE OWNER WILL BACKCHARGE THESE COSTS TO THE CONTRACTOR.

THE CONTRACTOR, IMMEDIATELY AFTER BEING AWARDED THE CONTRACT, SHALL PREPARE AND SUBMIT TO THE ARCHITECT, A DETAILED SCHEDULE OF SHOP DRAWINGS, PRODUCT DATA, CERTIFICATIONS, AND SAMPLE SUBMISSIONS AS REQUIRED BY EACH SECTION OF THE SPECIFICATIONS.

THIS SCHEDULE SHALL INDICATE DATES THE CONTRACTOR EXPECTS TO SUBMIT SHOP DRAWINGS, PRODUCT DATA, CERTIFICATIONS, OR SAMPLES, ALLOWING AMPLE LEAD TIME FOR REVIEW AND APPROVAL, TO PERMIT HIM TO MEET DATES ON WORK SCHEDULE SPECIFIED.

SUBMITTALS REQUIRING THE SELECTION OF A COLOR SHALL BE REVIEWED AND MARKED "REVIEWED" AND RETURNED WITHOUT THE COLOR SELECTION. COLOR SELECTIONS WILL NOT BE MADE UNTIL COLOR CHARTS FOR ALL RELATED PRODUCTS HAVE BEEN "REVIEWED" BY THE ARCHITECT. IN ORDER TO EXPEDITE THE COLOR SELECTION PROCESS, RELATED PRODUCTS SHOULD BE SUBMITTED IN SUCCESSION. SHOP DRAWINGS, PRODUCT DATA, CERTIFICATIONS, SAMPLES, AND OTHER SUBMITTALS NOT REVIEWED, APPROVED, AND SUBMITTED BY THE CONTRACTOR IN ACCORDANCE WITH THE GENERAL CONDITIONS AND THIS SECTION, WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT.

017300 PROJECT CLEANING

DESCRIPTION OF WORK

GENERAL: PROVIDE GENERAL CLEANING THROUGHOUT THE DEMOLITION AND CONSTRUCTION PERIOD. KEEP THE AREA FREE OF DEBRIS AND FIRE HAZARDS THROUGHOUT THE CONSTRUCTION PERIOD. SURROUNDING AREAS AND PROJECT ACCESS ROUTES SHALL BE KEPT FREE OF DEMOLITION AND CONSTRUCTION DEBRIS, DIRT AND DUST. SHOULD ANY SUCH AREA BECOME SOILED FROM CONSTRUCTION RELATED ACTIVITIES, THE CONTRACTOR SHALL CLEAN THE AREA IMMEDIATELY. SUCH EFFORTS TO DO SO SHALL INCLUDE:

PICKING UP, TRANSPORTING AND DISPOSING OF ALL MATERIALS

VACUUMING AREA WITH HEPA FILTERED VACUUM

WET MOPPING AREA

WIPING WALL SURFACES

COMPLIANCE

COMPLY WITH REGULATIONS OF AUTHORITIES HAVING JURISDICTION AND SAFETY STANDARDS FOR CLEANING. DO NOT BURN WASTE MATERIALS. DO NOT BURY DEBRIS OR EXCESS MATERIALS ON THE LOCAL COUNTY PROPERTY. DO NOT DISCHARGE VOLATILE, HARMFUL OR DANGEROUS MATERIALS INTO DRAINAGE SYSTEMS. REMOVE WASTE MATERIALS FROM THE SITE AND DISPOSE OF IN A LAWFUL MANNER.

017300.1 CUTTING AND PATCHING

PROCEDURAL REQUIREMENTS FOR CUTTING AND PATCHING.

DEFINITIONS

CUTTING: REMOVAL OF IN-PLACE CONSTRUCTION NECESSARY TO PERMIT INSTALLATION OR PERFORMANCE OF OTHER WORK.

PATCHING: FITTING AND REPAIR WORK REQUIRED TO RESTORE SURFACES TO ORIGINAL CONDITIONS AFTER INSTALLATION OF OTHER WORK.

QUALITY

STRUCTURAL ELEMENTS: DO NOT CUT AND PATCH STRUCTURAL ELEMENTS IN A MANNER THAT COULD CHANGE THEIR LOAD-CARRYING CAPACITY OR LOAD-DEFLECTION RATIO.

OPERATIONAL ELEMENTS: DO NOT CUT AND PATCH OPERATING ELEMENTS AND RELATED COMPONENTS IN A MANNER THAT RESULTS IN REDUCING THEIR CAPACITY TO PERFORM AS INTENDED OR THAT RESULTS IN INCREASED MAINTENANCE OR DECREASED OPERATIONAL LIFE OR SAFETY. OPERATING ELEMENTS INCLUDE THE FOLLOWING:

PRIMARY OPERATIONAL SYSTEMS AND EQUIPMENT.

FIRE-SUPPRESSION SYSTEMS.

MECHANICAL SYSTEMS PIPING AND DUCTS.

CONTROL SYSTEMS.

COMMUNICATION SYSTEMS.

ELECTRICAL WIRING SYSTEMS.

MISCELLANEOUS ELEMENTS: DO NOT CUT AND PATCH MISCELLANEOUS ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT COULD CHANGE THEIR LOAD-CARRYING CAPACITY, THAT RESULTS IN REDUCING THEIR CAPACITY TO PERFORM AS INTENDED, OR THAT RESULTS IN INCREASED MAINTENANCE OR DECREASED OPERATIONAL LIFE OR SAFETY. MISCELLANEOUS ELEMENTS INCLUDE THE FOLLOWING:

MEMBRANES AND FLASHINGS.

EQUIPMENT SUPPORTS.

PIPING, DUCTWORK, VESSELS, AND EQUIPMENT.

NOISE- AND VIBRATION-CONTROL ELEMENTS AND SYSTEMS.

MATERIALS

IN-PLACE MATERIALS: USE MATERIALS IDENTICAL TO IN-PLACE MATERIALS. FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH IN-PLACE ADJACENT SURFACES TO THE FULLEST EXTENT POSSIBLE.

IF IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED, USE MATERIALS THAT, WHEN INSTALLED, WILL MATCH THE VISUAL AND FUNCTIONAL PERFORMANCE OF IN-PLACE MATERIALS.

PERFORMANCE

GENERAL: EMPLOY SKILLED WORKERS TO PERFORM CUTTING AND PATCHING. PROCEED WITH CUTTING AND PATCHING AT THE EARLIEST FEASIBLE TIME, AND COMPLETE WITHOUT DELAY.

CUT IN-PLACE CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION, AND SUBSEQUENTLY PATCH AS REQUIRED TO RESTORE SURFACES TO THEIR ORIGINAL CONDITION.

CUTTING:

CUT IN-PLACE CONSTRUCTION BY SAWING, DRILLING, BREAKING, CHIPPING, GRINDING, AND SIMILAR OPERATIONS, INCLUDING EXCAVATION AND REFINISHING.

RETAINED OR ADJOINING CONSTRUCTION. IF POSSIBLE, REVIEW PROPOSED PROCEDURES WITH ORIGINAL INSTALLER, COMPLY WITH ORIGINAL INSTALLER'S WRITTEN RECOMMENDATIONS.

IN GENERAL, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING AND GRINDING, NOT HAMMERS AND CHOPPING. CUT HOLES AND SLOTS AS SMALL AS POSSIBLE, NEATLY TO SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.

FINISHED SURFACES: CUT OR DRILL FROM THE EXPOSED OR FINISHED SIDE INTO CONCEALED SURFACES.

CONCRETE OR MASONRY: CUT USING A CUTTING MACHINE, SUCH AS AN ABRASIVE SAW OR A DIAMOND-CORE DRILL.

MECHANICAL AND ELECTRICAL SERVICES: CUT OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED. CAP, VALVE, OR PLUG AND SEAL REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRANCE OF MOISTURE OR OTHER FOREIGN MATTER AFTER CUTTING.

PROCEED WITH PATCHING AFTER CONSTRUCTION OPERATIONS REQUIRING CUTTING ARE COMPLETE.

PATCHING:

PATCH CONSTRUCTION BY FILLING, REPAIRING, REFINISHING, CLOSING UP, AND SIMILAR OPERATIONS FOLLOWING PERFORMANCE OF OTHER WORK. PATCH WITH DURABLE SEAMS THAT ARE AS INVISIBLE AS POSSIBLE. PROVIDE MATERIALS AND COMPLY WITH INSTALLATION REQUIREMENTS SPECIFIED IN OTHER SECTIONS.

INSPECTION: WHERE FEASIBLE, TEST AND INSPECT PATCHED AREAS AFTER COMPLETION TO DEMONSTRATE INTEGRITY OF INSTALLATION.

EXPOSED FINISHES: RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND FINISH RESTORATION INTO RETAINED ADJOINING CONSTRUCTION IN A MANNER THAT WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.

SEAL PIPING, CONDUIT, AND SIMILAR FEATURES BEFORE APPLYING PAINT OR OTHER FINISHING MATERIALS.

RESTORE DAMAGED PIPE COVERING TO ITS ORIGINAL CONDITION.

FLOORS AND WALLS: WHERE WALLS OR PARTITIONS THAT ARE REMOVED EXTEND ONE FINISHED FLOOR INTO ANOTHER, PATCH AND REPAIR FLOOR AND WALL SURFACES IN THE NEW SPACE. PROVIDE AN EVEN SURFACE OR UNIFORM FINISH, COLOR, TEXTURE, AND APPEARANCE. REMOVE IN-PLACE FLOOR AND WALL COVERINGS AND REPLACE WITH NEW MATERIALS, IF NECESSARY, TO ACHIEVE UNIFORM COLORS IN A PAINTED SURFACE.

WHERE PATCHING OCCURS IN A PAINTED SURFACE, APPLY PRIMER AND INTERMEDIATE PAINT COATS OVER THE PATCH AND APPLY FINAL PAINT COAT OVER ENTIRE UNBROKEN SURFACE CONTAINING THE PATCH. PROVIDE ADDITIONAL COATS UNTIL PATCH BLENDS WITH ADJACENT SURFACES.

CELANGS: PATCH, REPAIR, OR REHANG IN-PLACE CEILING AS NECESSARY TO PROVIDE AN EVEN-PLANE SURFACE OF UNIFORM APPEARANCE.

EXTERIOR BUILDING ENCLOSURE: PATCH COMPONENTS IN A MANNER THAT RESTORES ENCLOSURE TO A WEATHERTIGHT CONDITION.

CLEANING

CLEANING: CLEAN AREAS AND SPACES WHERE CUTTING AND PATCHING ARE PERFORMED. COMPLETELY REMOVE PAINT, MORTAR, OILS, PUTTY, AND SIMILAR MATERIALS.

024119 SELECTIVE DEMOLITION

DEMOLITION AND REMOVAL OF SELECTED PORTIONS OF BUILDING OR STRUCTURE.

DEFINITIONS

REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE UNLESS INDICATED TO BE REMOVED AND SALVAGED OR REMOVED AND REINSTALLED.

EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED AND THAT ARE NOT OTHERWISE INDICATED TO BE REMOVED, REMOVED AND SALVAGED, OR REMOVED AND REINSTALLED.

PREINSTALLATION MEETING

PREDEMOLITION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE. INSPECT AND DISCUSS CONDITION OF CONSTRUCTION TO BE SELECTIVELY DEMOLISHED.

REVIEW STRUCTURAL LOAD LIMITATIONS OF EXISTING STRUCTURE.

FIELD CONDITIONS

OWNER WILL REMOVE PORTIONS OF BUILDING IMMEDIATELY ADJACENT TO SELECTIVE DEMOLITION AREA. CONDUCT SELECTIVE DEMOLITION SO OWNER'S OPERATIONS WILL NOT BE DISRUPTED.

NOTIFY ARCHITECT OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS BEFORE PROCEEDING WITH SELECTIVE DEMOLITION.

HAZARDOUS MATERIALS: IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN THE WORK.

HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER BEFORE START OF THE WORK. IF SUSPECTED HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB; IMMEDIATELY NOTIFY ARCHITECT AND OWNER. HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER UNDER A SEPARATE CONTRACT.

UTILITY SERVICE: MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS.

MAINTAIN FIRE-PROTECTION FACILITIES IN SERVICE DURING SELECTIVE DEMOLITION OPERATIONS.

EXAMINATION

VERIFY THAT UTILITIES HAVE BEEN DISCONNECTED AND CAPPED BEFORE STARTING SELECTIVE DEMOLITION OPERATIONS.

REVIEW RECORD DOCUMENTS OF EXISTING CONSTRUCTION PROVIDED BY OWNER. OWNER DOES NOT GUARANTEE THAT EXISTING CONDITIONS ARE SAME AS THOSE INDICATED IN RECORD DOCUMENTS.

SURVEY EXISTING CONDITIONS AND CORRELATE WITH REQUIREMENTS INDICATED TO DETERMINE EXTENT OF SELECTIVE DEMOLITION REQUIRED.

WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE THE NATURE AND EXTENT OF CONFLICT. PROMPTLY SUBMIT A WRITTEN REPORT TO ARCHITECT.

ENGAGE A PROFESSIONAL ENGINEER TO PERFORM AN ENGINEERING SURVEY OF CONDITION OF BUILDING TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF STRUCTURE OR ADJACENT STRUCTURES DURING SELECTIVE BUILDING DEMOLITION OPERATIONS.

PERFORM SURVEYS AS THE WORK PROGRESSES TO DETECT HAZARDS RESULTING FROM SELECTIVE DEMOLITION ACTIVITIES.

UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

EXISTING SERVICES/SYSTEMS TO BE REMOVED: LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS SERVING AREAS TO BE ARRANGED TO SHUT OFF INDICATED UTILITIES WITH UTILITY COMPANIES.

IF SERVICES/SYSTEMS ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE TEMPORARY SERVICES/SYSTEMS THAT BYPASS AREA OF SELECTIVE DEMOLITION AND THAT MAINTAIN CONTINUITY OF SERVICES/SYSTEMS TO OTHER PARTS OF BUILDING.

DISCONNECT, DEMOLISH, AND REMOVE FIRE-SUPPRESSION SYSTEMS, PLUMBING, AND HVAC SYSTEMS, EQUIPMENT, AND COMPONENTS INDICATED TO BE REMOVED.

PIPING TO BE REMOVED: REMOVE PORTION OF PIPING INDICATED TO BE REMOVED AND CAP OR PLUG REMAINING PIPING WITH SAME OR COMPATIBLE PIPING MATERIAL.

EQUIPMENT TO BE REMOVED: DISCONNECT AND CAP SERVICES AND REMOVE EQUIPMENT.

DUCTS TO BE REMOVED: REMOVE PORTION OF DUCTS INDICATED TO BE REMOVED AND PLUG REMAINING DUCTS WITH SAME OR COMPATIBLE DUCTWORK MATERIAL.

PREPARATION

SITE ACCESS AND TEMPORARY CONTROLS: CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH OTHER ADJACENT OCCUPIED AND USE FACILITIES.

TEMPORARY FACILITIES: PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.

PROVIDE PROTECTION TO ENSURE SAFE PASSAGE OF PEOPLE AROUND SELECTIVE DEMOLITION AREA AND TO AND FROM OCCUPIED PORTIONS OF BUILDING.

PROTECT WALLS, CEILING, FLOORS, AND OTHER EXISTING FINISH WORK THAT ARE TO REMAIN OR THAT ARE EXPOSED DURING SELECTIVE DEMOLITION OPERATIONS.

TEMPORARY SHORING: PROVIDE AND MAINTAIN SHORING, BRACING, AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE STABILITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION AND FINISHES TO REMAIN, AND TO PREVENT UNEXPECTED OR UNCONTROLLED MOVEMENT OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED.

STRENGTHEN OR ADD NEW SUPPORTS WHEN REQUIRED DURING PROGRESS OF SELECTIVE DEMOLITION.

EXECUTION

PROTECTION: COMPLY WITH EACH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROTECTING BUILDING AND OTHER SURFACES AGAINST DAMAGE FROM EXPOSURE TO ITS PRODUCTS. PREVENT CHEMICAL CLEANING SOLUTIONS FROM COMING INTO CONTACT WITH PEOPLE, MOTOR VEHICLES, LANDSCAPING, BUILDINGS, AND OTHER SURFACES THAT COULD BE HARMED BY SUCH CONTACT.

COVER ADJACENT SURFACES WITH MATERIALS THAT ARE ADJACENT TO RESIST CHEMICAL CLEANERS USED UNLESS PRODUCTS BEING USED WILL NOT DAMAGE ADJACENT SURFACES. USE PROTECTIVE MATERIALS THAT ARE WATERPROOF AND UV RESISTANT. APPLY MASKING AGENTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. DO NOT APPLY LIQUID STRIPPABLE MASKING AGENT TO PAINTED OR POROUS SURFACES. WHEN NO LONGER NEEDED, PROMPTLY REMOVE MASKING TO PREVENT ADHESIVE STAINING. DO NOT APPLY CHEMICAL SOLUTIONS DURING WINDS OF ENOUGH FORCE TO SPREAD THEM TO UNPROTECTED SURFACES. NEUTRALIZE ALKALINE AND ACID WASTES BEFORE DISPOSAL. DISPOSE OF RUNOFF FROM OPERATIONS BY LEGAL MEANS AND IN A MANNER THAT PREVENTS SOIL EROSION, UNDERMINING OF PAVING AND FOUNDATIONS, DAMAGE TO LANDSCAPING, AND WATER PENETRATION INTO BUILDING INTERIORS.

CLEANING PRE-CAST CONCRETE: GENERAL: CLEANING APPEARANCE STANDARD: CLEANED SURFACES ARE TO HAVE A UNIFORM APPEARANCE AS VIEWED FROM 20 FT. (6 M) AWAY BY AE. PROCEED WITH CLEANING IN AN ORDERLY MANNER. WORK FROM TOP TO BOTTOM OF EACH SCAFFOLD WIDTH AND FROM ONE END OF EACH ELEVATION TO THE OTHER. ENSURE THAT DIRTY RESIDUES AND RINSE WATER DO NOT WASH OVER DRY, CLEANED SURFACES. USE ONLY THOSE CLEANING METHODS INDICATED FOR EACH PRE-CAST CONCRETE MATERIAL AND LOCATION.

BRUSHES: DO NOT USE WIRE BRUSHES OR BRUSHES THAT ARE NOT RESISTANT TO CHEMICAL CLEANER BEING USED. SPRAY EQUIPMENT: USE SPRAY EQUIPMENT THAT PROVIDES CONTROLLED APPLICATION AT VOLUME AND PRESSURE INDICATED, MEASURED AT NOZZLE. ADJUST PRESSURE AND VOLUME TO ENSURE THAT CLEANING METHODS DO NOT DAMAGE SURFACES, INCLUDING JOINTS. EQUIP UNITS WITH PRESSURE GAUGES. FOR CHEMICAL-CLEANER SPRAY APPLICATION, USE LOW-PRESSURE TANK OR CHEMICAL PUMP SUITABLE FOR CHEMICAL CLEANER INDICATED.

EQUIPPED WITH NOZZLE HAVING A CONE-SHAPED SPRAY. FOR WATER-SPRAY APPLICATION, USE FAN-SHAPED SPRAY THAT DISPERSES WATER AT AN ANGLE OF 25 TO 50 DEGREES. FOR HIGH-PRESSURE WATER-SPRAY APPLICATION, USE FAN-SHAPED SPRAY THAT DISPERSES WATER AT AN ANGLE OF AT LEAST 40 DEGREES. PERFORM EACH CLEANING METHOD INDICATED IN A MANNER THAT RESULTS IN UNIFORM COVERAGE OF ALL SURFACES, INCLUDING CORNERS, MOLDINGS, AND INTERSTICES, AND THAT PRODUCES AN EVEN EFFECT WITHOUT STREAKING OR DAMAGING PRE-CAST CONCRETE SURFACES. KEEP WALL WET BELOW AREA BEING CLEANED TO PREVENT STREAKING FROM RUNOFF. PERFORM ADDITIONAL GENERAL CLEANING, PAINT AND STAIN REMOVAL, AND SPOT CLEANINGS OF SMALL AREAS THAT ARE NOTICEABLY DIFFERENT WHEN VIEWED IN ACCORDANCE WITH "CLEANING APPEARANCE STANDARD" PARAGRAPH. SO THAT CLEANED SURFACES BLEND SMOOTHLY INTO SURROUNDING AREAS. CHEMICAL-CLEANER APPLICATION METHODS: APPLY CHEMICAL CLEANERS TO PRE-CAST CONCRETE SURFACES IN ACCORDANCE WITH CHEMICAL-CLEANER MANUFACTURER'S WRITTEN INSTRUCTIONS. USE BRUSH OR SPRAY APPLICATION. DO NOT SPRAY APPLY AT PRESSURES EXCEEDING 50 PSI (345 KPA). DO NOT ALLOW CHEMICALS TO REMAIN ON SURFACE FOR PERIODS LONGER THAN THOSE INDICATED OR RECOMMENDED IN WRITING BY MANUFACTURER. RINSE OFF CHEMICAL RESIDUE AND SOIL BY WORKING UPWARD FROM BOTTOM TO TOP OF EACH TREATED AREA AT EACH STAGE OF SCAFFOLD SETTING. PERIODICALLY DURING EACH RINSE, TEST PH OF RINSE WATER RUNNING OFF OF CLEANED AREA TO DETERMINE THAT CHEMICAL CLEANER IS COMPLETELY REMOVED. APPLY NEUTRALIZING AGENT AND REPEAT RINSE IF NECESSARY TO PRODUCE TESTED PH OF BETWEEN 5.5 AND 12. AFTER CLEANING IS COMPLETE, REMOVE PROTECTION NO LONGER REQUIRED. REMOVE TAPE AND ADHESIVE MARKS.

PRELIMINARY CLEANING: REMOVING PLANT GROWTH: COMPLETELY REMOVE VISIBLE PLANT, MOSS, AND SHRUB GROWTH FROM PRE-CAST CONCRETE SURFACES. CAREFULLY REMOVE PLANTS, CREEPERS, AND VEGETATION BY CUTTING AT ROOTS AND ALLOWING REMAINING GROWTH TO DRY AS LONG AS POSSIBLE BEFORE REMOVAL. REMOVE LOOSE SOIL AND DIRT.

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PROVIDE BLOCKING AND NAILERS IN PARTITIONS WHERE ATTACHMENT OF FIXTURES, EQUIPMENT AND WHEREVER ELSE REQUIRED FOR ATTACHMENT OF SUPERIMPOSED ITEMS IS INDICATED. PROVIDE MINIMUM 1 X 2 INCH GROUNDS FOR SECURING CASEWORK AND OTHER ITEMS IN GYPSUM BOARD PARTITIONS AND OTHER CONSTRUCTION. PLYWOOD: STAMPED WITH APA TRADEMARK WITH PANEL GRADE AND RATINGS, APA EXPOSURE 1, MADE WITH FULLY WATERPROOF ADHESIVE, THICKNESS INDICATED. WHEN NOTED ON DRAWINGS WHERE WOOD IS IN CONTACT WITH MASONRY, CONCRETE OR MOISTURE PROVIDE PRESERVATIVE-TREATED PRODUCTS. WHENEVER VERIFY CARPENTRY IS FITTED TO OTHER WORK, OBTAIN MEASUREMENTS OF SUCH OTHER WORK, REUGH DIMENSIONS SHOWN AND SHOP DRAWING DETAILS.

FASTENERS: GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE. NAILS, BRADS, AND STAPLES: ASTM F1667. POWER-DRIVEN FASTENERS: NES NER-272. WOOD SCREWS: ASME B18.8.1. LAG BOLTS: ASME B18.2.1. INSTALLATION: SET ROUGH CARPENTRY TO REQUIRED LEVELS AND LINES, WITH MEMBERS PLUMB, TRUE TO LINE, CUT, AND FITTED. LOCATE FURRING, NAILERS, BLOCKING, GROUNDS, AND SIMILAR SUPPORTS TO COMPLY WITH REQUIREMENTS FOR ATTACHING OTHER CONSTRUCTION.

076200 SHEET METAL FLASHING AND TRIM SECTION CONTAINS: MANUFACTURED REGLETS AND COUNTERFLASHING. MANUFACTURED SHEET METAL FLASHING AND TRIM: REGLETS: UNITS OF TYPE, MATERIAL, AND PROFILE INDICATED, FORMED TO PROVIDE SECURE INTERLOCKING OF SEPARATE REGLET AND COUNTERFLASHING PIECES, AND COMPATIBLE WITH FLASHING INDICATED WITH FACTORY-MITERED AND WELDED CORNERS AND JUNCTIONS AND WITH INTERLOCKING COUNTERFLASHING ON EXTERIOR FACE, OF SAME METAL AS REGLET.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE (1) OF THE FOLLOWING: CHENEY FLASHING COMPANY: RL QUICK LOCK SURFACE MOUNT FRY REGLET CORPORATION: SM SURFACE MOUNTED REGLET. HICKMAN, W. P. COMPANY: DRIVE LOCK REGLET. MATERIAL: ALUMINUM, 0.032-INCH THICK. SURFACE-MOUNTED TYPE: PROVIDE WITH SLOTTED HOLES FOR FASTENING TO SUBSTRATE, WITH NEOPRENE OR OTHER SUITABLE WEATHERPROOFING WASHERS, AND WITH CHANNEL FOR SEALANT AT TOP EDGE. ACCESSORIES: COUNTERFLASHING WIND-RESTRAINT CLIPS: PROVIDE CLIPS TO BE INSTALLED BEFORE COUNTERFLASHING TO PREVENT WIND UPLIFTS OF COUNTERFLASHING LOWER EDGE. FINISH: MILL.

MISCELLANEOUS MATERIALS GENERAL: PROVIDE MATERIALS AND TYPES OF FASTENERS, SOLDER, WELDING RODS, PROTECTIVE COATINGS, SEPARATORS, SEALANTS, AND MISCELLANEOUS ITEMS AS REQUIRED FOR COMPLETE SHEET METAL FLASHING AND TRIM INSTALLATION AND RECOMMENDED BY MANUFACTURE OF MANUFACTURED ITEM UNLESS OTHERWISE INDICATED.

FASTENERS FOR ALUMINUM: ALUMINUM OR SERIES 300 STAINLESS STEEL. BITUMINOUS COATING: COLD-APPLIED ASPHALT EMULSION COMPLYING WITH ASTM D1187. ASPHALT ROOFING CEMENT: ASTM D4586, ASBESTOS FREE, OF CONSISTENCY REQUIRED FOR APPLICATION. INSTALLATION: METAL PROTECTION: WHERE DISSIMILAR METALS WILL CONTACT EACH OTHER OR CORROSIVE SUBSTRATES, PROTECT AGAINST GALVANIC ACTION BY PAINTING CONTACT SURFACES WITH BITUMINOUS COATING OR BY OTHER PERMANENT SEPARATION AS RECOMMENDED BY SMACNA. CUT BACK SIDE OF UNPAINTED ALUMINUM FLASHING AND TRIM WITH BITUMINOUS COATING WHERE FLASHING AND TRIM WILL CONTACT WOOD, FERROUS METAL, OR CEMENTITIOUS CONSTRUCTION. COUNTERFLASHING: COORDINATE INSTALLATION OF COUNTERFLASHING WITH INSTALLATION OF BASE FLASHING. INSERT COUNTERFLASHING IN REGLETS OR RECEIVERS AND FIT TIGHTLY TO BASE FLASHING. EXTEND COUNTERFLASHING FOUR (4) INCHES OVER BASE FLASHING. LAP COUNTERFLASHING WITH A MINIMUM OF 1/2 INCH AND BED WITH SEALANT. SECURE IN A WATERPROOF MANNER BY MEANS OF SNAP-IN INSTALLATION AND SEALANT.

079200 JOINT SEALANTS INTERIOR JOINTS IN THE FOLLOWING VERTICAL SURFACES AND HORIZONTAL NON-TRAFFIC SURFACES: CONTROL JOINTS ON EXPOSED INTERIOR SURFACES. PERIMETER JOINTS BETWEEN INTERIOR WALL SURFACES AND FRAMES OF INTERIOR DOORS. JOINTS BETWEEN PLUMBING FIXTURES AND ADJOINING WALLS, FLOORS, AND COUNTERS. ALUMINUM SKYLIGHT FRAMING SEALANTS. COMPATIBILITY: PROVIDE JOINT SEALANTS, BACKINGS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE (1) ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE. SILICONE SEALANTS SINGLE-COMPONENT, NON-SAG, NEUTRAL-CURING SILICONE JOINT SEALANT: ASTM C920, TYPE S, GRADE NS, CLASS 100/90, FOR USE NT. DOW CORNING CORPORATION, 790. GE ADVANCED MATERIALS - SILICONES: SILPRUF LM SCS2700. PECORA CORPORATION, 301 NS. TREMCO INCORPORATED, SPECTREM 1.

URETHANE SEALANTS MULTICOMPONENT, NON-SAG, URETHANE JOINT SEALANT: ASTM C920, TYPE M, GRADE NS, CLASS 50, FOR USE NT. PECORA CORPORATION, DYNATROL II. POLYMER SYSTEMS, INC., PSI-270. TREMCO INCORPORATED, DYMERIC 240. MULTICOMPONENT, NON-SAG, TRAFFIC-GRADE, URETHANE JOINT SEALANT: ASTM C920, TYPE M, GRADE NS, CLASS 25, FOR USE T. PECORA CORPORATION, DYNATRED. SIKA CORPORATION, CONSTRUCTION PRODUCTS DIVISION, SIKAFLEX - 2C NS. TREMCO INCORPORATED, VULKEM 227. LATEX SEALANTS LATEX JOINT SEALANT: ACRYLIC LATEX OR SILICONIZED ACRYLIC LATEX, ASTM C834, TYPE CP, GRADE NF. BASF BUILDING SYSTEMS; SONOLAC. BOSTIK, INC.; CHEM-CALK 600. MAY NATIONAL ASSOCIATES, INC.; BONDAFLEX 600. PECORA CORPORATION; AC-20+. TREMCO INCORPORATED; TREMFLX 634. ACOUSTICAL JOINT SEALANTS JOINT SEALANT BACKING CYLINDRICAL SEALANT BACKINGS: ASTM C1330, TYPE C (CLOSED-CELL MATERIAL WITH A SURFACE SKIN), AND OF SIZE AND DENSITY TO CONTROL SEALANT DEPTH AND OTHERWISE CONTRIBUTE TO PRODUCING OPTIMUM SEALANT PERFORMANCE.

INSTALLATION SEALANT INSTALLATION STANDARD: COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS RECOMMENDATIONS IN ASTM C1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED. JOINT SEALANT SCHEDULE JOINT-SEALANT APPLICATION: EXTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NON-TRAFFIC SURFACES. JOINT LOCATIONS: JOINTS BETWEEN METAL PANELS. JOINTS BETWEEN DIFFERENT MATERIALS LISTED ABOVE. PERIMETER JOINTS BETWEEN MATERIALS LISTED ABOVE AND FRAMES OF DOORS, WINDOWS AND LOUVERS. CONTROL AND EXPANSION JOINTS IN CEILINGS AND OTHER OVERHEAD SURFACES. OTHER JOINTS AS INDICATED. SILICONE JOINT SEALANT: SINGLE COMPONENT, NON-SAG, NEUTRAL CURING, CLASS 100/50. JOINT-SEALANT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURERS' FULL RANGE OF COLORS. JOINT-SEALANT APPLICATION: INTERIOR JOINTS IN HORIZONTAL TRAFFIC SURFACES. JOINT LOCATIONS: ISOLATION JOINTS IN CAST-IN-PLACE CONCRETE SLABS. OTHER JOINTS AS INDICATED. URETHANE JOINT SEALANT: MULTICOMPONENT, NON-SAG, TRAFFIC GRADE, CLASS 25. JOINT-SEALANT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURERS' FULL RANGE OF COLORS.

JOINT-SEALANT APPLICATION: EXTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NON-TRAFFIC SURFACES. JOINT LOCATIONS: CONTROL AND EXPANSION JOINTS IN UNIT MASONRY. PERIMETER JOINTS BETWEEN MATERIALS LISTED ABOVE AND FRAMES OF DOORS, WINDOWS AND LOUVERS. OTHER JOINTS AS INDICATED. URETHANE JOINT SEALANT: MULTICOMPONENT, NON-SAG, CLASS 50. JOINT-SEALANT COLOR: AS SELECTED BY ARCHITECT FROM MANUFACTURERS' FULL RANGE OF COLORS.

081100 HOLLOW METAL DOORS AND FRAMES STANDARD HOLLOW METAL DOORS AND FRAMES. DOORS GENERAL: PROVIDE DOORS OF DESIGN INDICATED, FABRICATED WITH SMOOTH SURFACES, WITHOUT VISIBLE JOINTS OR SEAMS ON EXPOSED FACES UNLESS OTHERWISE INDICATED. COMPLY WITH ANSISI/A250.6. DESIGN: FLUSH PANEL. CORE CONSTRUCTION: MANUFACTURERS STANDARD KRAFT-PAPEL HONEYCOMB, POLYSTYRENE, POLYURETHANE, POLYISOCYANURATE, MINERAL-BOARD, OR VERTICAL STEEL-STIFFENER CORE. THICKNESS: 1-3/4 INCH. FIRE-RATED DOOR ASSEMBLIES: ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED BY A QUALIFIED TESTING AGENCY, FOR FIRE-PROTECTION RATINGS INDICATED, BASED ON TESTING AT POSITIVE PRESSURE ACCORDING TO UL 10C. FIRE DOOR CORE: AS REQUIRED TO PROVIDE FIRE-PROTECTION AND TEMPERATURE-RISE RATINGS INDICATED.

EXTERIOR DOORS: FACE SHEETS FABRICATED FROM METALLIC-COATED STEEL SHEET. PROVIDE DOORS COMPLYING WITH REQUIREMENTS INDICATED BELOW BY REFERENCING ANSISI/A250.6 FOR LEVEL AND MODEL AND ANSISI/A250.4 FOR PHYSICAL PERFORMANCE LEVEL. LEVEL 3 AND PHYSICAL PERFORMANCE LEVEL A (EXTRA HEAVY DUTY), MODEL 2 (SEAMLESS). HARDWARE REINFORCEMENT: FABRICATE ACCORDING TO ANSISI/A250.6 WITH REINFORCING PLATES FROM SAME MATERIAL AS DOOR FACE SHEETS. MOLDINGS FROM GLAZED LITES IN DOORS: MINIMUM 0.032-INCH THICK, FABRICATED FROM SAME MATERIAL AS DOOR FACE SHEET IN WHICH THEY ARE INSTALLED.

FRAMES EXTERIOR FRAMES: FABRICATED FROM METALLIC-COATED STEEL SHEET. FABRICATE FRAMES WITH MITERED OR COPEd CORNERS. RETAIN ONE OF THREE OPTIONS IN FIRST SUBPARAGRAPH BELOW. ACCORDING TO ANSISI/A250.6, FRAMES ARE SUPPLIED AS KNOCKED DOWN UNLESS OTHERWISE INDICATED. PAGE-WELDED FRAMES ARE WELDED ONLY ALONG THE FACE AND NOT ALONG THE SPOFFIT, STOPS, AND RABBETS. FULLY WELDED FRAMES ARE COMPLETELY WELDED ALONG ALL ELEMENTS. FRAMES FOR LEVEL 3 STEEL DOORS: 0.053-INCH THICK STEEL SHEET. PROVIDE STOPS, ANCHORS AND OTHER ITEMS AS INDICATED. REINFORCE, DRILL, TAP, AND OTHERWISE PREPARE FRAMES TO RECEIVE FINISH HARDWARE AND OTHER ITEMS INDICATED. PREPARE FRAMES TO RECEIVE RUBBER SILENCERS. WHERE FIRE RATED FRAMES ARE INDICATED CONSTRUCT FRAMES TO UL REQUIREMENTS. FURNISH WITH LABELS ATTACHED.

INSTALLATION INSTALL FRAMES PLUMB, TRUE, AND SECURELY ANCHORED AT FLOORS, WITH LEVEL HEADS. SECURELY BRACED TO RECEIVE SUBSEQUENT ADJACENT WORK. INSTALL RUBBER SILENCERS PRIOR TO FRAME INSTALLATION AND REMOVE THEM PRIOR TO FINISH PAINTING. INSTALL FIRE RATED FRAMES IN ACCORDANCE WITH NFPA 80. AFTER INSTALLATION SAND SMOOTH ANY RUSTED OR DAMAGED AREAS OF PRIMER AND APPLY TOUCH UP OF COMPATIBLE PRIMER. INSTALL HARDWARE SPECIFIED TO BE FURNISHED OR REQUIRED FOR PROPER OPERATION OF DOORS.

FINISH PAINTING: THOROUGHLY CLEAN OFF OIL, DIRT, RUST, AND OTHER MATTER THAT WILL IMPAIR PAINT ADHESION. BONDERIZE METAL SURFACES OF FRAMES AND THEN APPLY A SHOP COAT OF RUST INHIBITIVE METAL PRIMER. PRIMER: LEAD FREE TYPE, APPLIED IN ACCORDANCE WITH RECOMMENDATIONS OF PAINT MANUFACTURER, AND BAKED. RE-INSTALL RUBBER SILENCERS IN FRAMES AFTER FINISH PAINTING IS COMPLETED.

083310 OVERHEAD COILING GRILLES ELECTRICALLY OPERATED, OVERHEAD COILING GRILLES. PERFORMANCE REQUIREMENTS STRUCTURAL PERFORMANCE: PROVIDE WOOD HOOD FOR EXISTING OVERHEAD COILING GRILLE CAPABLE OF WITHSTANDING THE EFFECTS OF GRAVITY LOADS AND THE FOLLOWING LOADS AND STRESSES WITHOUT EVIDENCING PERMANENT DEFORMATION OF DOOR COMPONENTS: WIND LOAD: WIND LOADS, BASED ON LOCAL BUILDING CODES. IMPACT TEST FOR FLYING DEBRIS: COMPLY WITH ASTM E1196, TESTED ACCORDING TO ASTM E1866. PRODUCTS MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: COOKSON COMP CORNELL IRON WORKS, INC. OVERHEAD DOOR CO. HOOD AND ACCESSORIES FABRICATE WOOD HOOD FOR EXISTING STEEL COILING DOOR OF MINIMUM 24 GAGE THICK, HOT-DIP GALVANIZED STEEL SHEET WITH 690 ZINC COATING, COMPLYING WITH ASTM A653. SHAPE: MANUFACTURERS STANDARD. WEATHERSEALS FOR EXTERIOR DOORS: AT DOOR HEAD, USE 1/8-INCH THICK, REPLACEABLE, CONTINUOUS SHEET SECURED TO INSIDE OF HOOD.

FINISH POWDER-COAT FINISH: MANUFACTURERS STANDARD POWDER-COAT FINISH CONSISTING OF PRIMER AND TOPCOAT ACCORDING TO COATING MANUFACTURERS WRITTEN INSTRUCTIONS FOR CLEANING, PRETREATMENT, APPLICATION, THERMOSETTING, AND MINIMUM DRY FILM THICKNESS. COLOR AND GLOSS: AS SELECTED BY ARCHITECT FROM MANUFACTURERS' FULL RANGE. INSTALLATION GENERAL: INSTALL COILING GRILLE HOOD COMPLETE WITH NECESSARY HARDWARE, HEAD MOLDING STRIPS, ANCHORS, ISOLTS, HANGERS, AND EQUIPMENT SUPPORTS.

087100 - DOOR HARDWARE SECTION INCLUDES: MECHANICAL DOOR HARDWARE RELATED SECTIONS: DIVISION 01 "GENERAL REQUIREMENTS" SECTIONS FOR ALLOWANCES, ALTERNATES, OWNER FURNISHED CONTRACTOR INSTALLED, PROJECT MANAGEMENT AND COORDINATION. DIVISION 06 SECTION "ROUGH CARPENTRY" DIVISION 07 SECTION "JOINT SEALANTS" FOR SEALANT REQUIREMENTS APPLICABLE TO THRESHOLD INSTALLATION SPECIFIED IN THIS SECTION. DIVISION 08 SECTION "METAL DOORS AND FRAMES" REFERENCES: UL LLC UL 108 - FIRE TEST OF DOOR ASSEMBLIES UL 10C - POSITIVE PRESSURE TEST OF FIRE DOOR ASSEMBLIES UL 1784 - AIR LEAKAGE TESTS OF DOOR ASSEMBLIES UL 305 - PANIC HARDWARE DH1 - DOOR AND HARDWARE INSTITUTE SEQUENCE AND FORMAT FOR THE HARDWARE SCHEDULE RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE KEYING SYSTEMS AND NOMENCLATURE INSTALLATION GUIDE FOR DOORS AND HARDWARE NFPA - NATIONAL FIRE PROTECTION ASSOCIATION NFPA 70 - NATIONAL ELECTRIC CODE NFPA 80 - 2016 EDITION - STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES NFPA 101 - LIFE SAFETY CODE NFPA 105 - SMOKE AND DRAFT CONTROL DOOR ASSEMBLIES NFPA 252 - FIRE TESTS OF DOOR ASSEMBLIES ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE ANSI A117.1 - 2011 EDITION - ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES ANSIBHMA A156.1 - A156.29, AND ANSIBHMA A156.31 - STANDARDS FOR HARDWARE AND SPECIALTIES ANSIBHMA A156.28 - RECOMMENDED PRACTICES FOR KEYING SYSTEMS ANSIVDMA 1. 1A - INTERIOR ARCHITECTURAL WOOD FLUSH DOORS ANSISDI A250.8 - STANDARD STEEL DOORS AND FRAMES SUBMITTALS: ACTION SUBMITTALS:

PRODUCT DATA: SUBMIT TECHNICAL PRODUCT DATA FOR EACH ITEM OF DOOR HARDWARE. INSTALLATION INSTRUCTIONS, MAINTENANCE OF OPERATING PARTS AND FINISH, AND OTHER INFORMATION NECESSARY TO SHOW COMPLIANCE WITH REQUIREMENTS. SAMPLES FOR VERIFICATION: IF REQUESTED BY ARCHITECT, SUBMIT PRODUCTION SAMPLE OF REQUESTED DOOR HARDWARE UNIT IN FINISH INDICATED AND TAGGED WITH FULL DESCRIPTION FOR CORRELATION WITH SCHEDULE. SAMPLES WILL BE RETURNED TO SUPPLIER UNLESS OTHERWISE ACCEPTABLE TO ARCHITECT MAY, AFTER FINAL CHECK OF OPERATIONS, BE INCORPORATED INTO WORK, WITHIN LIMITATIONS OF KEY COORDINATION REQUIREMENTS. DOOR HARDWARE SCHEDULE: SUBMIT CONCURRENT WITH SUBMISSIONS OF PRODUCT DATA, SAMPLES, AND SHOP DRAWINGS. COORDINATE SUBMISSION OF DOOR HARDWARE SCHEDULE WITH SCHEDULING REQUIREMENTS OF OTHER WORK TO FACILITATE FABRICATION OF OTHER WORK CRITICAL IN PROJECT CONSTRUCTION SCHEDULE. SUBMIT UNDER DIRECT SUPERVISION OF A DOOR HARDWARE INSTITUTE (DHI) CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC) OR DOOR HARDWARE CONSULTANT (DHC) WITH HARDWARE SETS IN VERTICAL FORMAT AS ILLUSTRATED BY SEQUENCE OF FORMAT FOR THE HARDWARE SCHEDULE PUBLISHED BY DHI. INDICATE COMPLETE DESIGNATIONS OF EACH ITEM REQUIRED FOR EACH OPENING. INCLUDE: DOOR INDEX; DOOR NUMBER, HEADING NUMBER, AND ARCHITECT'S HARDWARE SET NUMBER, QUANTITY, TYPE, STYLE, FUNCTION, SIZE, AND FINISH OF EACH HARDWARE ITEM; NAME AND MANUFACTURER OF EACH ITEM. FASTENINGS AND OTHER PERTINENT INFORMATION LOCATION OF EACH HARDWARE SET CROSS-REFERENCED TO INDICATIONS ON DRAWINGS. EXPLANATION OF ALL ABBREVIATIONS, SYMBOLS, AND CODES CONTAINED IN SCHEDULE. MOUNTING LOCATIONS FOR HARDWARE, DOOR AND FRAME SIZES AND MATERIALS. DEGREE OF DOOR SWING AND HANDING. OPERATIONAL DESCRIPTION OF OPENINGS WITH ELECTRIFIED HARDWARE COVERING EGRESS, INGRESS (ACCESS), AND FIRE/SMOKE ALARM CONNECTIONS.

KEY SCHEDULE: AFTER KEYING CONFERENCE, PROVIDE KEYING SCHEDULE THAT INCLUDES LEVELS OF KEYING, EXPLANATIONS OF KEY SYSTEM'S FUNCTION, KEY SYMBOLS, USED, AND DOOR NUMBERS CONTROLLED. USE ANSIBHMA A156.28 "RECOMMENDED PRACTICES FOR KEYING SYSTEMS" AS GUIDELINE FOR NOMENCLATURE, DEFINITIONS, AND APPROACH FOR SELECTING OPTIMAL KEYING SYSTEMS. FURNISH TO ARCHITECT 3 COPIES OF KEYING SCHEDULE FOR REVIEW AND DETAILED IN ACCORDANCE WITH REFERENCED DHI PUBLICATION, INCLUDE SCHEMATIC KEYING DIAGRAM AND INDEX EACH KEY TO UNIQUE DOOR DESIGNATIONS. INDEX KEYING SCHEDULE BY DOOR NUMBER, KEYSET, HARDWARE HEADING NUMBER, CROSS KEYING INSTRUCTIONS, AND SPECIAL KEY STAMPING INSTRUCTIONS. PROVIDE ONE COMPLETE BITTING LIST OF KEYS CUTS AND ONE KEY SYSTEM SCHEMATIC ILLUSTRATING SYSTEM USAGE AND EXPANSION. FORWARD BITTING LIST, KEY CUTS AND KEY SYSTEM SCHEMATIC DIRECTLY TO OWNER BY MEANS AS DIRECTED BY OWNER. PREPARE KEY SCHEDULE BY OR UNDER SUPERVISION OF SUPPLIER, DETAILING OWNERS FINAL KEYING INSTRUCTIONS FOR LOCKS.

INFORMATIONAL SUBMITTALS: PROVIDE QUALIFICATION DATA FOR SUPPLIER, INSTALLER AND ARCHITECTURAL HARDWARE CONSULTANT. PROVIDE PRODUCT DATA: CERTIFY THAT DOOR HARDWARE APPROVED FOR USE ON TYPES AND SIZES OF LABELED FIRE-RATED DOORS COMPLIES WITH LISTED FIRE-RATED DOOR ASSEMBLIES. INCLUDE WARRANTIES FOR SPECIFIED DOOR HARDWARE. CLOSEOUT SUBMITTALS: OPERATIONS AND MAINTENANCE DATA: PROVIDE IN ACCORDANCE WITH DIVISION 01 AND INCLUDE: COMPLETE INFORMATION ON CARE, MAINTENANCE, AND ADJUSTMENT; DATA ON REPAIR AND REPLACEMENT PARTS, AND INFORMATION ON PRESERVATION OF FINISHES. CATALOG PAGES FOR EACH PRODUCT. FINAL APPROVED HARDWARE SCHEDULE EDITED TO REFLECT CONDITIONS AS INSTALLED. FINAL KEYING SCHEDULE. COPY OF WARRANTIES INCLUDING APPROPRIATE REFERENCE NUMBERS FOR MANUFACTURERS TO IDENTIFY PRODUCT. INSPECTION AND TESTING: SUBMIT WRITTEN REPORTS TO THE OWNER AND AUTHORITY HAVING JURISDICTION (AHJ) OF THE RESULTS OF FUNCTIONAL TESTING AND INSPECTION FOR: FIRE DOOR ASSEMBLIES, IN COMPLIANCE WITH NFPA 80. REQUIRED EGRESS DOOR ASSEMBLIES, IN COMPLIANCE WITH NFPA 101. QUALITY ASSURANCE: QUALIFICATIONS AND RESPONSIBILITIES: SUPPLIER: RECOGNIZED ARCHITECTURAL HARDWARE SUPPLIER WITH A MINIMUM OF 5 YEARS DOCUMENTED EXPERIENCE SUPPLYING BOTH MECHANICAL AND ELECTROMECHANICAL DOOR HARDWARE SIMILAR IN QUANTITY, TYPE, AND QUALITY TO THAT INDICATED FOR THIS PROJECT. SUPPLIER TO BE RECOGNIZED AS A FACTORY DIRECT DISTRIBUTOR BY THE MANUFACTURER OF THE PRIMARY MATERIALS WITH A WAREHOUSE FACILITY IN THE PROJECT'S VICINITY. SUPPLIER TO HAVE ON STAFF, A CERTIFIED ARCHITECTURAL HARDWARE CONSULTANT (AHC) OR DOOR HARDWARE CONSULTANT (DHC) AVAILABLE TO OWNER, ARCHITECT, AND CONTRACTOR, AT REASONABLE TIMES DURING THE WORK FOR CONSULTATION. INSTALLER: QUALIFIED TRADESPERSON SKILLED IN THE APPLICATION OF COMMERCIAL GRADE HARDWARE WITH EXPERIENCE INSTALLING DOOR HARDWARE SIMILAR IN QUANTITY, TYPE, AND QUALITY AS INDICATED FOR THIS PROJECT. ARCHITECTURAL HARDWARE CONSULTANT: PERSON WHO IS EXPERIENCED IN PROVIDING CONSULTING SERVICES FOR DOOR HARDWARE INSTALLATIONS THAT ARE COMPARABLE IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND MEETS THESE REQUIREMENTS. FOR DOOR HARDWARE: DHI CERTIFIED AHC OR DHC. CAN PROVIDE INSTALLATION AND TECHNICAL DATA TO ARCHITECT AND OTHER RELATED SUBCONTRACTORS. CAN INSPECT AND VERIFY COMPONENTS ARE IN WORKING ORDER UPON COMPLETION OF INSTALLATION. CAPABLE OF PRODUCING WIRING DIAGRAM AND COORDINATING INSTALLATION OF ELECTRIFIED HARDWARE WITH ARCHITECT AND ELECTRICAL ENGINEERS. SINGLE SOURCE RESPONSIBILITY: OBTAIN EACH TYPE OF DOOR HARDWARE FROM SINGLE MANUFACTURER.

CERTIFICATIONS: FIRE-RATED DOOR OPENINGS: PROVIDE DOOR HARDWARE FOR FIRE-RATED OPENINGS THAT COMPLY WITH NFPA 80 AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. PROVIDE ONLY ITEMS OF DOOR HARDWARE THAT ARE LISTED PRODUCTS TESTED BY UL LLC, INTERTEK TESTING SERVICES, OR OTHER TESTING AND INSPECTING ORGANIZATIONS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION FOR USE ON TYPES AND SIZES OF DOORS INDICATED, BASED ON TESTING AT POSITIVE PRESSURE AND ACCORDING TO NFPA 252 OR UL 10C AND TO COMPLIANCE WITH REQUIREMENTS OF FIRE-RATED DOORS AND DOOR FRAME LABELS. ACCESSIBILITY REQUIREMENTS: COMPLY WITH GOVERNING ACCESSIBILITY REGULATIONS CITED IN "REFERENCES" ARTICLE 087100. 1.02.D3 HEREIN FOR DOOR HARDWARE OR DOORS IN AN ACCESSIBLE ROUTE. THIS PROJECT MUST COMPLY WITH ALL FEDERAL AMERICANS WITH DISABILITY ACT REGULATIONS AND ALL LOCAL ACCESSIBILITY REGULATIONS.

PRE-INSTALLATION MEETINGS: KEYING CONFERENCE: INCORPORATE KEYING CONFERENCE DECISIONS INTO FINAL KEYING SCHEDULE AFTER REVIEWING DOOR HARDWARE KEYING SYSTEM INCLUDING FUNCTION OF BUILDING, FLOW OF TRAFFIC, PURPOSE OF EACH AREA, DEGREE OF SECURITY REQUIRED, AND PLANS FOR FUTURE EXPANSION. PRELIMINARY KEYING SCHEMATIC DIAGRAM. REQUIREMENTS FOR KEY CONTROL SYSTEM. REQUIREMENTS FOR ACCESS CONTROL. ACCESS FOR DELIVERY OF KEYS. PRE-INSTALLATION CONFERENCE: REVIEW AND FINALIZE CONSTRUCTION SCHEDULE AND VERIFY AVAILABILITY OF MATERIALS, INSTALLERS PERSONNEL, EQUIPMENT, AND FACILITIES NEEDED TO MAKE PROGRESS AND AVOID DELAYS. INSPECT AND DISCUSS PREPARATORY WORK PERFORMED BY OTHER TRADES. INSPECT AND VERIFY DIMENSIONS IN FOR ELECTRIFIED DOOR HARDWARE. REVIEW SEQUENCE OF OPERATION FOR EACH TYPE OF ELECTRIFIED DOOR HARDWARE. REVIEW REQUIRED TESTING, INSPECTING, AND CERTIFYING PROCEDURES. REVIEW QUESTIONS OR CONCERNS RELATED TO PROPER INSTALLATION AND ADJUSTMENT OF DOOR HARDWARE. DELIVERY, STORAGE, AND HANDLING: INVENTORY DOOR HARDWARE ON RECEIPT AND PROVIDE SECURE LOCK-UP FOR HARDWARE DELIVERED TO PROJECT SITE. PROMPTLY PLACE PRODUCTS DAMAGED DURING SHIPPING. TAG EACH ITEM OR PACKAGE SEPARATELY WITH IDENTIFICATION COORDINATED WITH FINAL DOOR HARDWARE SCHEDULE, AND INCLUDE INSTALLATION INSTRUCTIONS, TEMPLATES, AND NECESSARY FASTENERS WITH EACH ITEM OR PACKAGE. DELIVER EACH ARTICLE OF HARDWARE IN MANUFACTURERS ORIGINAL PACKAGING. MAINTAIN MANUFACTURER-RECOMMENDED ENVIRONMENTAL CONDITIONS THROUGHOUT STORAGE AND INSTALLATION PERIODS. PROVIDE SECURE LOCK-UP FOR DOOR HARDWARE DELIVERED TO PROJECT. CONTROL HANDLING AND INSTALLATION OF HARDWARE ITEMS SO THAT COMPLETION OF WORK WILL NOT BE DELAYED BY HARDWARE LOSSES BOTH BEFORE AND AFTER INSTALLATION. HANDLE HARDWARE IN MANNER TO AVOID DAMAGE, MARRING, OR SCRATCHING. CORRECT, REPLACE OR REPAIR PRODUCTS DAMAGED DURING WORK. PROTECT PRODUCTS AGAINST MALFUNCTION DUE TO PAINT, SOLVENT, CLEANERS, OR ANY CHEMICALS. DELIVER KEYS TO MANUFACTURER OF KEY CONTROL SYSTEM FOR SUBSEQUENT DELIVERY TO OWNER.

COORDINATION: COORDINATE LAYOUT AND INSTALLATION OF FLOOR-RECESSED DOOR HARDWARE WITH FLOOR CONSTRUCTION. CAST ANCHORING INSERTS INTO CONCRETE. INSTALLATION TEMPLATES: DISTRIBUTE FOR DOORS, FRAMES, AND OTHER WORK SPECIFIED TO BE FACTORY OR SHOP PREPARED. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING DOOR HARDWARE TO COMPLY WITH INDICATED REQUIREMENTS. SECURITY: COORDINATE INSTALLATION OF DOOR HARDWARE, KEYING, AND ACCESS CONTROL WITH OWNERS SECURITY CONSULTANT. WARRANTY: MANUFACTURERS STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF DOOR HARDWARE THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN PUBLISHED WARRANTY PERIOD. WARRANTY DOES NOT COVER DAMAGE OR FAULTY OPERATION DUE TO IMPROPER INSTALLATION, IMPROPER USE OR ABUSE. WARRANTY PERIOD: BEGINNING FROM DATE OF SUBSTANTIAL COMPLETION, FOR DURATIONS INDICATED IN MANUFACTURERS PUBLISHED INSTRUCTIONS. MAINTENANCE: FURNISH COMPLETE SET OF SPECIAL TOOLS REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF HARDWARE, INCLUDING CHANGING OF CYLINDERS. TURN OVER UNUSED MATERIALS TO OWNER FOR MAINTENANCE PURPOSES. PRODUCTS: MANUFACTURERS: APPROVAL OF ALTERNATE MANUFACTURERS AND/OR PRODUCTS OTHER THAN THOSE LISTED AS "SCHEDULED MANUFACTURER" OR "ACCEPTABLE MANUFACTURERS" IN THE INDIVIDUAL ARTICLE FOR THE PRODUCT CATEGORY ARE ONLY TO BE CONSIDERED BY OFFICIAL SUBSTITUTION OF PRODUCTS IN ACCORDANCE WITH SECTION 01.25.00. APPLICATION OF PRODUCTS FROM MANUFACTURERS INDICATED IN "ACCEPTABLE MANUFACTURERS" IS CONTINGENT UPON THOSE PRODUCTS PROVIDING ALL FUNCTIONS AND FEATURES AND MEETING ALL REQUIREMENTS OF SCHEDULED MANUFACTURERS PRODUCT. WHERE SPECIFIED HARDWARE IS NOT ADAPTABLE TO FINISHED SHAPE OR SIZE OF MEMBERS REQUIRING HARDWARE, FURNISH SUITABLE TYPES HAVING SAME OPERATION AND QUALITY AS TYPE SPECIFIED, SUBJECT TO ARCHITECTS APPROVAL.

FABRICATION: PROVIDE DOOR HARDWARE MANUFACTURED TO COMPLY WITH PUBLISHED TEMPLATES GENERALLY PREPARED FOR MACHINE, WOOD, AND SHEET METAL SCREWS. PROVIDE SCREWS ACCORDING TO MANUFACTURERS RECOGNIZED INSTALLATION STANDARDS FOR APPLICATION INTENDED. FINISH EXPOSED SCREWS TO MATCH HARDWARE FINISH. OR, IF EXPOSED IN SUBSTRATE OF OTHER WORK, TO MATCH FINISH OF THIS OTHER WORK INCLUDING PREPARED FOR PAINT SURFACES TO RECEIVE PAINTED FINISH. PROVIDE CONCEALED FASTENERS WHEREVER POSSIBLE FOR HARDWARE UNITS EXPOSED WHEN DOOR IS CLOSED. COORDINATE WITH "METAL DOORS AND FRAMES", "FLUSH WOOD DOORS", "STILE AND RAIL WOOD DOORS" TO ENSURE PROPER REINFORCEMENTS. ADVISE THE ARCHITECT WHERE VISIBLE FASTENERS, SUCH AS THRU BOLTS, ARE REQUIRED. PROVIDE FASTENING BOLTS, EXPANSION SHIELDS, DROP PLATES AND OTHER DEVICES NECESSARY FOR HARDWARE INSTALLATION. WHERE FASTENERS ARE EXPOSED TO VIEW, FINISH TO MATCH ADJACENT DOOR HARDWARE MATERIAL. HINGES - SCHEDULED MANUFACTURER AND PRODUCT: IVES 88B SERIES OR APPROVED EQUIVALENT REQUIREMENTS: PROVIDE HINGES CONFORMING TO ANSIBHMA A156.1. PROVIDE FIVE KNUCKLE BALL BEARING HINGES. 1-1/34 INCH (44 MM) THICK DOORS. UP TO AND INCLUDING 36 INCHES (914 MM) WIDE. EXTERIOR: STANDARD WEIGHT, BRONZE OR STAINLESS STEEL, 4-1/2 INCHES (114 MM) HIGH. INTERIOR: STANDARD WEIGHT, STEEL, 4-1/2 INCHES (114 MM) HIGH. 1-1/34 INCH (44 MM) THICK DOORS OVER 36 INCHES (914 MM) WIDE. EXTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. AT 2 INCHES OR THICKER DOORS: EXTERIOR: HEAVY WEIGHT, BRONZE OR STAINLESS STEEL, 5 INCHES (127 MM) HIGH INTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. INTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. ADJUST HINGE WIDTH FOR DOOR, FRAME, AND WALL CONDITIONS TO ALLOW PROPER DEGREE OF OPENING. PROVIDE THREE HINGES PER DOOR LEAF FOR DOORS 90 INCHES (2286 MM) OR LESS IN HEIGHT, AND ONE ADDITIONAL HINGE FOR EACH 30 INCHES (762 MM) OF ADDITIONAL DOOR HEIGHT. HINGE PINS: EXCEPT AS OTHERWISE INDICATED, PROVIDE HINGE PINS AS FOLLOWS: STEEL HINGES: STEEL PINS. NON-FERROUS HINGES: STAINLESS STEEL PINS. OUT-SWINGING INTERIOR DOORS: NON-REMOVABLE PIN-OUT SWINGING INTERIOR LOCKABLE DOORS: NON-REMOVABLE PINS. INTERIOR NON-LOCKABLE DOORS: NON-RISING PINS. CYLINDRICAL LOCKSETS - SCHEDULED MANUFACTURER AND PRODUCT: SCHLAGE ND SERIES (RHODES) HEAVY DUTY LEVER LOCKSET OR APPROVED EQUIVALENT REQUIREMENTS: LEVER THRU SOLID BRASS, BRONZE, OR STAINLESS STEEL. CAST OR FORGED IN DESIGN AND STYLE. THROUGH ROSES AND EXTERNAL LEVER SPRING CAGES. PROVIDE THRU-BOLT LEVERS WITH 2-PICCE FINISHES. VANILGARD: PROVIDE LEVERS WITH VANDAL RESISTANT TECHNOLOGY FOR USE AT HEAVY TRAFFIC OR ABUSIVE APPLICATIONS. EXIT DEVICES - SCHEDULED MANUFACTURER AND PRODUCT: VON DUPRIN 98L-BE HEAVY DUTY RIM EXIT DEVICE WITH PASSAGE LEVER OR APPROVED EQUIVALENT REQUIREMENTS: PROVIDE GRADE 1 RIM EXIT DEVICE WITH LEVER TRIM, WIDE STILE PUSH/PAD, PASSAGE FUNCTION, 06 LEVER WITH ACTUATION, FIELD REVERSIBLE, COMPLIANT WITH NFPA 80, NFPA 101, A117.1 ACCESSIBILITY CODE AND ANSIBHMA A156.3-2001, LATEST REVISION. CYLINDER GENERAL: PROVIDE CYLINDERS TO MATCH LOCKSET MANUFACTURERS AS INDICATED. REFER TO "KEYING" ARTICLE. HEREIN, PROVIDE CYLINDERS IN THE BELOW-LISTED CONFIGURATIONS). DISTRIBUTED THROUGHOUT THE PROJECT AS INDICATED. PATENTED RESTRICTED SMALL FORMAT: CYLINDER WITH SMALL FORMAT INTERCHANGEABLE CORES (SFIC) WITH RESTRICTED, PATENTED KEYWAY. PATENT PROTECTION: CYLINDERS/CORES REQUIRING USE OF RESTRICTED, PATENTED KEYS. PATENT PROTECTED: NICKEL SILVER BOTTOM PINS. DOORS - SCHEDULED MANUFACTURER AND PRODUCT: LCN DOOR CLOSERS - HEAVY DUTY CAST ALUMINUM 4050A SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: DOOR CLOSERS TO BE FROM ONE MANUFACTURER, MATCHING IN DESIGN AND STYLE, WITH THE SAME TYPE DOOR PREPARATIONS AND TEMPLATES REGARDLESS OF APPLICATION OR SPRING SIZE. PROVIDE SURFACE MOUNTED HEAVY DUTY DOOR CLOSERS: ANSIBHMA A156.4, GRADE 1 CERTIFIED PRODUCTS DIRECTORY (CPD) LISTED, CLOSERS TO BE BRACK AND PINION TYPE, ONE PIECE CAST IRON OR ALUMINUM ALLOY BODY CONSTRUCTION, WITH ADJUSTABLE BACKCHECK AND SEPARATE NON-CRITICAL VALVES FOR CLOSING SWEEP AND LATCH SPRING CONTROL. AND WITH DOOR STOP MECHANISM TO ABSORB DEAD STOP SHOCK ON ARM AND TOP HINGE. CLOSERS TO BE UNIVERSAL NON-HANDED WITH FULL SIZE COVERS. STANDARDS: CLOSERS TO COMPLY WITH UL-10C FOR POSITIVE PRESSURE FIRE TEST AND BE U.L. LISTED FOR USE OF FIRE RATED DOORS, SIZE OF UNITS. COMPLY WITH MANUFACTURERS WRITTEN RECOMMENDATIONS FOR SIZING OF DOOR CLOSERS DEPENDING ON SIZE OF DOOR, EXPOSURE TO WEATHER, AND ANTICIPATED FREQUENCY OF USE. CLOSERS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, PER ANSICC117.1. CLOSER ARMS: PROVIDE HEAVY DUTY CLOSER MAIN ARM AND SECONDARY ARM (LENGTHS PROPORTIONAL TO THE DOOR WIDTH) FABRICATED OF FORGED STEEL OTHERWISE INDICATED IN HARDWARE SETS. CLOSER ACCESSORIES: PROVIDE DOOR CLOSER ACCESSORIES INCLUDING CUSTOM TEMPLATES, SPECIAL MOUNTING BRACKETS, SPACERS AND DROP PLATES AS REQUIRED FOR PROPER INSTALLATION. PROVIDE THROUGH-BOLT AND SECURITY TYPE FASTENERS AS SPECIFIED IN THE HARDWARE SETS. PROVIDING GSETS: PROVIDE GSETS WITH COMPLETE SPRING POWER ADJUSTMENT, SIZES 1 THRU 6, AND FULLY OPERATIONAL, ADJUSTABLE ACCORDING TO DOOR SIZE, FREQUENCY OF USE, AND OPENING FORCE. KICK PLATES - SCHEDULED MANUFACTURER AND PRODUCT: IVES - 8400 COMMERCIAL GRADE SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: .050" THICK SATIN STAINLESS STEEL, WITH FOUR BEVELED EDGES AND COUNTERSUNK MOUNTING HOLES. WALL STOPS - SCHEDULED MANUFACTURER AND PRODUCT: IVES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: DOOR STOPS AND HOLDERS TO BE OF TYPE AND DESIGN AS SPECIFIED BELOW OR IN THE HARDWARE SETS. DOOR STOPS AND BUMPERS: ANSIBHMA A156.16, GRADE 1 DOOR STOPS AND WALL BUMPERS. PROVIDE WALL BUMPERS, EITHER CONVEX OR CONCAVE TYPES WITH ANCHORAGE AS INDICATED. UNLESS FLOOR OR OTHER TYPES OF DOOR STOPS ARE SPECIFIED IN HARDWARE SETS, DO NOT MOUNT FLOOR STOPS WHERE THEY WILL IMPEDE TRAFFIC. WHERE FLOOR OR WALL BUMPERS ARE NOT APPROPRIATE, PROVIDE OVERHEAD TYPE STOPS AND HOLDERS. SEALS - SCHEDULED MANUFACTURER AND PRODUCTS: ZERO INTERNATIONAL - PSA, SILICONE SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: THRESHOLDS, WEATHERSTRIPPING, SWEEPS, AND GASKET SEALS TO BE OF TYPE AND DESIGN AS SPECIFIED BELOW OR IN THE HARDWARE SETS. PROVIDE CONTINUOUS WEATHERSTRIP GASKETING ON EXTERIOR DOORS. AT EXTERIOR APPLICATIONS PROVIDE NON-CORROSIVE FASTENERS AND ELSEWHERE WHERE INDICATED, FIRE LABELED GASKETING: ASSEMBLIES COMPLYING WITH NFPA 80 THAT ARE LISTED AND LABELED BY A TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, FOR FIRE RATINGS INDICATED, BASED ON TESTING ACCORDING TO UL-10C. FIRE TESTS OF DOOR ASSEMBLIES, AND NFPA 252. STANDARD METHODS OF FIRE TESTS OF DOOR ASSEMBLIES. REPLACEABLE SEAL STRIPS: PROVIDE HIGH QUALITY SILICONE RUBBER SEALS WITH STRONG PRESSURE-SENSITIVE ADHESIVE APPLIED FOR SUPERIOR ADHESION AND LONG TERM HOLDING STRENGTH AND EXCELLENT SEALING PERFORMANCE UNDER EXTREME TEMPERATURE VARIATIONS. PROVIDE ONLY THOSE UNITS WHERE RESILIENT OR FLEXIBLE SEAL STRIPS ARE EASILY REPLACEABLE AND READILY AVAILABLE FROM STOCKS MAINTAINED BY MANUFACTURER. SWEEPS - SCHEDULED MANUFACTURER AND PRODUCT: ZERO INTERNATIONAL - ALUMINUM AND SYNTHETIC RUBBER BLEND SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: SWEEPS TO BE OF TYPE AND DESIGN AS SPECIFIED BELOW OR IN THE HARDWARE SETS. PROVIDE CONTINUOUS SWEEPS ON EXTERIOR DOORS. AT EXTERIOR APPLICATIONS PROVIDE NON-CORROSIVE FASTENERS AND ELSEWHERE WHERE INDICATED. REPLACEABLE SEAL STRIPS: PROVIDE HIGH QUALITY SILICONE RUBBER SEALS WITH RESILIENT OR FLEXIBLE SEAL STRIPS ARE EASILY REPLACEABLE AND READILY AVAILABLE FROM STOCKS MAINTAINED BY MANUFACTURER. THRESHOLDS - SCHEDULED MANUFACTURER AND PRODUCT: ZERO INTERNATIONAL OR APPROVED EQUIVALENT REQUIREMENTS: PROVIDE ALUMINUM THRESHOLDS FEATURING FULL BODY STRENGTH COMPOSITE ALUMINUM OXIDE AND SILICON CARBIDE FILLER, AS WELL AS BONDED PHOTOLUMINESCENT AND NON-SLIP ABRASIVE EPOXY TREAD FILLER. KEYING - SCHEDULED SYSTEM: NEW FACTORY REGISTERED SYSTEM: PROVIDE A FACTORY REGISTERED KEYING SYSTEM, COMPLYING WITH GUIDELINES IN ANSIBHMA A156.28, INCORPORATING DECISIONS MADE AT KEYING CONFERENCE. EXISTING NON-FACTORY REGISTERED SYSTEM: PROVIDE CYLINDERS/CORES KEYS TO OWNERS EXISTING KEYING SYSTEM MANAGED BY OWNERS LOCKSMITH, COMPLYING WITH GUIDELINES IN ANSIBHMA A156.28, INCORPORATING DECISIONS MADE AT KEYING CONFERENCE. CONTACT: FIRM NAME: GROVE LOCK, DOOR & SAFE CO. FIRM ADDRESS: 12 GROVE STREET, PLAINFIELD, NEW JERSEY 07060 FIRM EMAIL: SECURITY@GROVELOCK.COM FIRM TELEPHONE: 908.756.4887

REQUIREMENTS: PERMANENT KEYING: PROVIDE PERMANENT CYLINDERS/CORES KEYS BY THE MANUFACTURER ACCORDING TO THE FOLLOWING KEY SYSTEM. MASTER KEYING SYSTEM AS DIRECTED BY THE OWNER. FORWARD BITTING LIST AND KEYS SEPARATELY FROM CYLINDERS, BY MEANS AS DIRECTED BY OWNER. FAILURE TO COMPLY WITH FORWARDING REQUIREMENTS WILL BE CAUSE FOR REWORK. TO MATCH FINISH OF THIS OTHER WORK INCLUDING PREPARED FOR PAINT SURFACES TO RECEIVE PAINTED FINISH. PROVIDE CONCEALED FASTENERS WHEREVER POSSIBLE FOR HARDWARE UNITS EXPOSED WHEN DOOR IS CLOSED. COORDINATE WITH "METAL DOORS AND FRAMES", "FLUSH WOOD DOORS", "STILE AND RAIL WOOD DOORS" TO ENSURE PROPER REINFORCEMENTS. ADVISE THE ARCHITECT WHERE VISIBLE FASTENERS, SUCH AS THRU BOLTS, ARE REQUIRED. PROVIDE FASTENING BOLTS, EXPANSION SHIELDS, DROP PLATES AND OTHER DEVICES NECESSARY FOR HARDWARE INSTALLATION. WHERE FASTENERS ARE EXPOSED TO VIEW, FINISH TO MATCH ADJACENT DOOR HARDWARE MATERIAL. HINGES - SCHEDULED MANUFACTURER AND PRODUCT: IVES 88B SERIES OR APPROVED EQUIVALENT REQUIREMENTS: PROVIDE HINGES CONFORMING TO ANSIBHMA A156.1. PROVIDE FIVE KNUCKLE BALL BEARING HINGES. 1-1/34 INCH (44 MM) THICK DOORS. UP TO AND INCLUDING 36 INCHES (914 MM) WIDE. EXTERIOR: STANDARD WEIGHT, BRONZE OR STAINLESS STEEL, 4-1/2 INCHES (114 MM) HIGH. INTERIOR: STANDARD WEIGHT, STEEL, 4-1/2 INCHES (114 MM) HIGH. 1-1/34 INCH (44 MM) THICK DOORS OVER 36 INCHES (914 MM) WIDE. EXTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. AT 2 INCHES OR THICKER DOORS: EXTERIOR: HEAVY WEIGHT, BRONZE OR STAINLESS STEEL, 5 INCHES (127 MM) HIGH INTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. INTERIOR: HEAVY WEIGHT, STEEL, 5 INCHES (127 MM) HIGH. ADJUST HINGE WIDTH FOR DOOR, FRAME, AND WALL CONDITIONS TO ALLOW PROPER DEGREE OF OPENING. PROVIDE THREE HINGES PER DOOR LEAF FOR DOORS 90 INCHES (2286 MM) OR LESS IN HEIGHT, AND ONE ADDITIONAL HINGE FOR EACH 30 INCHES (762 MM) OF ADDITIONAL DOOR HEIGHT. HINGE PINS: EXCEPT AS OTHERWISE INDICATED, PROVIDE HINGE PINS AS FOLLOWS: STEEL HINGES: STEEL PINS. NON-FERROUS HINGES: STAINLESS STEEL PINS. OUT-SWINGING INTERIOR DOORS: NON-REMOVABLE PIN-OUT SWINGING INTERIOR LOCKABLE DOORS: NON-REMOVABLE PINS. INTERIOR NON-LOCKABLE DOORS: NON-RISING PINS. CYLINDRICAL LOCKSETS - SCHEDULED MANUFACTURER AND PRODUCT: SCHLAGE ND SERIES (RHODES) HEAVY DUTY LEVER LOCKSET OR APPROVED EQUIVALENT REQUIREMENTS: LEVER THRU SOLID BRASS, BRONZE, OR STAINLESS STEEL. CAST OR FORGED IN DESIGN AND STYLE. THROUGH ROSES AND EXTERNAL LEVER SPRING CAGES. PROVIDE THRU-BOLT LEVERS WITH 2-PICCE FINISHES. VANILGARD: PROVIDE LEVERS WITH VANDAL RESISTANT TECHNOLOGY FOR USE AT HEAVY TRAFFIC OR ABUSIVE APPLICATIONS. EXIT DEVICES - SCHEDULED MANUFACTURER AND PRODUCT: VON DUPRIN 98L-BE HEAVY DUTY RIM EXIT DEVICE WITH PASSAGE LEVER OR APPROVED EQUIVALENT REQUIREMENTS: PROVIDE GRADE 1 RIM EXIT DEVICE WITH LEVER TRIM, WIDE STILE PUSH/PAD, PASSAGE FUNCTION, 06 LEVER WITH ACTUATION, FIELD REVERSIBLE, COMPLIANT WITH NFPA 80, NFPA 101, A117.1 ACCESSIBILITY CODE AND ANSIBHMA A156.3-2001, LATEST REVISION. CYLINDER GENERAL: PROVIDE CYLINDERS TO MATCH LOCKSET MANUFACTURERS AS INDICATED. REFER TO "KEYING" ARTICLE. HEREIN, PROVIDE CYLINDERS IN THE BELOW-LISTED CONFIGURATIONS). DISTRIBUTED THROUGHOUT THE PROJECT AS INDICATED. PATENTED RESTRICTED SMALL FORMAT: CYLINDER WITH SMALL FORMAT INTERCHANGEABLE CORES (SFIC) WITH RESTRICTED, PATENTED KEYWAY. PATENT PROTECTION: CYLINDERS/CORES REQUIRING USE OF RESTRICTED, PATENTED KEYS. PATENT PROTECTED: NICKEL SILVER BOTTOM PINS. DOORS - SCHEDULED MANUFACTURER AND PRODUCT: LCN DOOR CLOSERS - HEAVY DUTY CAST ALUMINUM 4050A SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: DOOR CLOSERS TO BE FROM ONE MANUFACTURER, MATCHING IN DESIGN AND STYLE, WITH THE SAME TYPE DOOR PREPARATIONS AND TEMPLATES REGARDLESS OF APPLICATION OR SPRING SIZE. PROVIDE SURFACE MOUNTED HEAVY DUTY DOOR CLOSERS: ANSIBHMA A156.4, GRADE 1 CERTIFIED PRODUCTS DIRECTORY (CPD) LISTED, CLOSERS TO BE BRACK AND PINION TYPE, ONE PIECE CAST IRON OR ALUMINUM ALLOY BODY CONSTRUCTION, WITH ADJUSTABLE BACKCHECK AND SEPARATE NON-CRITICAL VALVES FOR CLOSING SWEEP AND LATCH SPRING CONTROL. AND WITH DOOR STOP MECHANISM TO ABSORB DEAD STOP SHOCK ON ARM AND TOP HINGE. CLOSERS TO BE UNIVERSAL NON-HANDED WITH FULL SIZE COVERS. STANDARDS: CLOSERS TO COMPLY WITH UL-10C FOR POSITIVE PRESSURE FIRE TEST AND BE U.L. LISTED FOR USE OF FIRE RATED DOORS, SIZE OF UNITS. COMPLY WITH MANUFACTURERS WRITTEN RECOMMENDATIONS FOR SIZING OF DOOR CLOSERS DEPENDING ON SIZE OF DOOR, EXPOSURE TO WEATHER, AND ANTICIPATED FREQUENCY OF USE. CLOSERS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, PER ANSICC117.1. CLOSER ARMS: PROVIDE HEAVY DUTY CLOSER MAIN ARM AND SECONDARY ARM (LENGTHS PROPORTIONAL TO THE DOOR WIDTH) FABRICATED OF FORGED STEEL OTHERWISE INDICATED IN HARDWARE SETS. CLOSER ACCESSORIES: PROVIDE DOOR CLOSER ACCESSORIES INCLUDING CUSTOM TEMPLATES, SPECIAL MOUNTING BRACKETS, SPACERS AND DROP PLATES AS REQUIRED FOR PROPER INSTALLATION. PROVIDE THROUGH-BOLT AND SECURITY TYPE FASTENERS AS SPECIFIED IN THE HARDWARE SETS. PROVIDING GSETS: PROVIDE GSETS WITH COMPLETE SPRING POWER ADJUSTMENT, SIZES 1 THRU 6, AND FULLY OPERATIONAL, ADJUSTABLE ACCORDING TO DOOR SIZE, FREQUENCY OF USE, AND OPENING FORCE. KICK PLATES - SCHEDULED MANUFACTURER AND PRODUCT: IVES - 8400 COMMERCIAL GRADE SERIES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: .050" THICK SATIN STAINLESS STEEL, WITH FOUR BEVELED EDGES AND COUNTERSUNK MOUNTING HOLES. WALL STOPS - SCHEDULED MANUFACTURER AND PRODUCT: IVES OR APPROVED EQUIVALENT REQUIREMENTS: GENERAL: DOOR STOPS AND HOLDERS TO BE OF TYPE AND DESIGN AS SPECIFIED BELOW OR IN THE HARDWARE SETS. DOOR STOPS AND BUMPERS: ANSIBHMA A156.16, GRADE 1 DOOR STOPS AND WALL BUMPERS. PROVIDE WALL BUMPERS, EITHER CONVEX OR CONCAVE TYPES WITH ANCHORAGE AS INDICATED. UNLESS FLOOR OR OTHER TYPES OF

TEMPERED SAFETY GLASS: CLEAR TEMPERED GLASS SHALL BE USED AS REQUIRED BY THE CONSUMER PRODUCTS SAFETY COMMISSION SAFETY GLAZING STANDARDS, 16 CFR PART 1201 FOR GLAZING ENTRANCE AND NON_FIRE RATED DOORS, TRANSOMS, SIDELIGHTS, AND OTHER NON_FIRE RATED SAFETY GLAZING AS INDICATED ON DRAWINGS. MINIMUM THICKNESS SHALL BE 1/4 INCH AT DOORS, SIDELIGHTS AND TRANSOMS. TONG MARKS SHALL NOT BE CONSPICUOUS. TEMPERED GLASS SHALL BE STAMPED WITH INCONSPICUOUS MANUFACTURER'S DATA AND CONFORM TO OTHER DATA RELATING TO TEMPERING. COMPLY WITH ASTM C 1048, KIND FT, CONDITION A UNCOATED, TYPE 1 TRANSPARENT FLAT, CLASS 1, QUALITY Q3 SELECT GLAZING QUALITY. COMPLY WITH ANSI Z_97.1.

LEAD GLASS: LEAD-BARIUM, POLISHED FLOAT GLASS CONTAINING NOT LESS THAN 60 PERCENT HEAVY METAL OXIDES, INCLUDING NOT LESS THAN 48 PERCENT LEAD OXIDE BY WEIGHT.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE (1) OF THE FOLLOWING:

- AMEROP ENTERPRISES, INC.
MCGORRY GLASS, INC.
SCHOTT NORTH AMERICA, INC.

PERFORMANCE REQUIREMENTS:

PROVIDE GLASS AND GLAZING MATERIALS FOR CONTINUITY OF BUILDING ENCLOSURE VAPOR RETARDER AND AIR BARRIER:

TO UTILIZE THE INNER PANE OF MULTIPLE PANE SEALED UNITS FOR THE CONTINUITY OF THE AIR BARRIER AND VAPOR RETARDER SEAL.

TO MAINTAIN A CONTINUOUS AIR BARRIER AND VAPOR RETARDER THROUGHOUT THE GLAZED ASSEMBLY FROM GLASS PANE TO HEEL BEAD OF GLAZING SEALANT.

LIMIT GLASS DEFLECTION TO 1/200 OR FLEXURE LIMIT OF GLASS WITH FULL RECOVERY OF GLAZING MATERIALS, WHICHEVER IS LESS.

WIND LOAD CRITERIA: WIND SPEED = 100 MPH

Table with 2 columns: WIND EXPOSURE = 'B', WIND IMPORTANCE FACTOR = 1.15, INTERNAL PRESSURE = ± 0.18, EXTERIOR WALL = -25.46 PSF, COMPONENTS = -26.55 PSF

SUBMITTALS:

PRODUCT DATA:

HINGES: PROVIDE STRUCTURAL, PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS, SIZE LIMITATIONS, SPECIAL HANDLING OR INSTALLATION REQUIREMENTS. GLAZING SEALANTS, COMPOUNDS AND ACCESSORIES: PROVIDE CHEMICAL, FUNCTIONAL, AND ENVIRONMENTAL CHARACTERISTICS, LIMITATIONS, SPECIAL APPLICATION REQUIREMENTS. IDENTIFY AVAILABLE COLORS WHERE EXPOSED.

SAMPLES:

GLASS: SUBMIT TWO SAMPLES 12 X 12 INCH IN SIZE, ILLUSTRATING EACH GLASS UNIT, COLORATION AND DESIGN. GLAZING MATERIALS: SUBMIT 4 INCH LONG BEAD OF GLAZING SEALANT AND GASKETS, COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

TINTS SHALL BE SELECTED FROM MANUFACTURER'S FULL RANGE OF TINT OPTIONS. MANUFACTURER'S CERTIFICATE: CERTIFY GLASS MEETS OR EXCEEDS SPECIFIED REQUIREMENTS.

QUALITY ASSURANCE:

PERFORM WORK IN ACCORDANCE WITH GANA GLAZING MANUAL, GANA SEALANT MANUAL, GANA LAMINATED GLASS DESIGN GUIDE AND SIGNA FOR GLAZING INSTALLATION METHODS. MAINTAIN ONE COPY OF EACH DOCUMENT ON SITE.

QUALIFICATIONS:

INSTALLER: COMPANY SPECIALIZING IN PERFORMING WORK OF THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

PRE-INSTALLATION MEETING:

CONVENE MINIMUM ONE WEEK BEFORE STARTING WORK OF THIS SECTION.

ENVIRONMENTAL REQUIREMENTS:

DO NOT INSTALL GLAZING WHEN AMBIENT TEMPERATURE IS LESS THAN 50 DEGREES F. MAINTAIN MINIMUM AMBIENT TEMPERATURE BEFORE, DURING AND 24 HOURS AFTER INSTALLATION OF GLAZING COMPOUNDS.

WARRANTY:

PROVIDE A TEN YEAR WARRANTY TO INCLUDE COVERAGE FOR SEALED GLASS UNITS FROM SEAL FAILURE, INTERPANE DUSTING OR MISTING, AND REPLACEMENT OF SAME.

PROVIDE A FIVE YEAR WARRANTY TO INCLUDE COVERAGE FOR DELAMINATION OF LAMINATED GLASS AND REPLACEMENT OF SAME.

EXTRA MATERIALS:

SUPPLY TWO OF EACH GLASS SIZE AND EACH GLASS TYPE, OF INSULATED GLASS UNITS, AND LAMINATED GLASS UNITS.

PRODUCTS:

GLAZING MANUFACTURERS - PROVIDE ONE OF THE FOLLOWING:

- VITRO ARCHITECTURAL GLASS, CLEAR.
OLDCASTLE GLASS, CLEAR.
JE BERKOWITZ, CLEAR.
OR APPROVED EQUAL.

COMPONENTS:

GLAZING FOR ALUMINUM WINDOWS AND ALUMINUM STOREFRONT SYSTEMS:

INSULATING GLASS UNITS: ASTM E774 AND E773, WITH GLASS ELASTOMER EDGE SEAL; LOW E OR EQUIVALENT COATING ON SURFACE 3; PURGE INTERPANE SPACE WITH DRY AIR, TOTAL UNIT THICKNESS 1 INCH.

TYPE G1 - INSULATING VISION GLASS UNITS (1-INCH THICK TOTAL):

- OUTER PANE: CLEAR TEMPERED GLASS.
INNER PANE: CLEAR / COATED TEMPERED GLASS.
VITRO SOLARBAN60 LOW-E (#3 SURFACE).
SOLAR HEAT GAIN COEFFICIENT: 0.30 SHGC.
SHADING COEFFICIENT: .45 SC
VISIBLE LIGHT TRANSMISSION: 69%
INSULATING GLASS UNIT EDGE SEAL MATERIAL: COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

GLAZING FOR EXTERIOR DOORS (NON-RATED):

SAFETY GLASS (TYPE SG): CONFORM TO CPSC 16 CFR 1201, MINIMUM THICKNESS 1/4 INCH UNLESS OTHERWISE INDICATED.

TYPE G2 - (AT NON-RATED EXTERIOR DOORS): SAFETY GLASS (TYPE SG): CONFORM TO CPSC 16 CFR 1201, MINIMUM THICKNESS 1/4 INCH UNLESS OTHERWISE INDICATED.

ACCESSORIES:

ELASTOMERIC GLAZING SEALANTS: MATERIALS COMPATIBLE WITH ADJACENT MATERIALS INCLUDING GLASS, INSULATING GLASS SEALS, AND GLAZING CHANNELS. SILICONE GLAZING SEALANT: ASTM C920, TYPE S, GRADE NS, CLASS A AND USE SUITABLE FOR GLAZING APPLICATION INDICATED; SINGLE COMPONENT; NEUTRAL CURING; CAPABLE OF WATER IMMERSION WITHOUT LOSS OF PROPERTIES; NON-BLEEDING, NON-STAINING; COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

MANUFACTURERS: PROVIDE ONE OF THE FOLLOWING:

- DOW CORNING, 795 SILICONE BUILDING SEALANT.
PECORA; 864.
GENERAL ELECTRIC SILICONES, SILPRUF.
OR APPROVED EQUAL.

GLAZING SPLINES: ASTM C864 OPTION I, RESILIENT NEOPRENE EXTRUDED SHAPE TO SUIT GLAZING CHANNEL, RETAINING SLOT.

GLASS - AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PRE-FORMED GLAZING TAPE: SIZE TO SUIT APPLICATION.

PREFORMED BUTYL COMPOUND WITH INTEGRAL RESILIENT TUBE SPACING DEVICE; 10 TO 15 SHORE A DUROMETER HARDNESS, COILED ON RELEASE PAPER; BLACK COLOR; PECORA; DYNA-SEAL BUTYL GLAZING TAPE OR APPROVED EQUAL.

BUTYL CORNER SEALANT: ASTM C920 SINGLE COMPONENT NON SKINNING BUTYL COMPATIBLE WITH GLAZING TAPE; COLOR TO MATCH TAPE; PECORA; BR96 CURTAIN WALL SEALANT OR APPROVED EQUAL.

GLAZING TAPE: CLOSED CELL POLYVINYL CHLORIDE FOAM, COILED ON RELEASE PAPER OVER ADHESIVE ON TWO SIDES, MAXIMUM WATER ABSORPTION BY VOLUME OF 2 PERCENT, DESIGNED FOR COMPRESSION OF 25 PERCENT TO EFFECT AN AIR BARRIER AND VAPOR RETARDER SEAL.

SETTING BLOCKS: ASTM C864 OPTION I, NEOPRENE, 80 TO 90 SHORE A DUROMETER HARDNESS, LENGTH OF 0.1 INCH FOR EACH SQUARE FOOT OF GLAZING OR MINIMUM 4 INCH X WIDTH OF GLAZING RABBIT SPACE MINUS 1/16 INCH X HEIGHT TO SUIT GLAZING METHOD AND PANE WEIGHT AND AREA.

SPACER SHIMS: ASTM C864 OPTION I, NEOPRENE, 50 TO 60 SHORE A DUROMETER HARDNESS, MINIMUM 3 INCH LONG X ONE HALF THE HEIGHT OF THE GLAZING STOP X THICKNESS TO SUIT APPLICATION.

SOURCE QUALITY CONTROL AND TESTS:

PROVIDE SHOP INSPECTION AND TESTING FOR INSULATED GLASS.

TEST SAMPLES IN ACCORDANCE WITH ANSI Z97.1, ASTM E773, ASTM E546, AND ASTM E576.

EXECUTION:

EXAMINATION: VERIFY OPENINGS FOR GLAZING ARE CORRECTLY SIZED AND WITHIN ACCEPTABLE TOLERANCE. VERIFY SURFACES OF GLAZING CHANNELS OR RECESSES ARE CLEAN, FREE OF OBSTRUCTIONS THAT MAY IMPEDE MOISTURE MOVEMENT, WEALS ARE CLEAR, AND READY TO RECEIVE GLAZING.

PREPARATION: CLEAN CONTACT SURFACES WITH SOLVENT AND WIPE DRY. SEAL POROUS GLAZING CHANNELS OR RECESSES WITH SUBSTRATE COMPATIBLE PRIMER OR SEALER. PRIME SURFACES SCHEDULED TO RECEIVE SEALANT.

INSTALLATION: PERFORM INSTALLATION IN ACCORDANCE WITH GANA GLAZING MANUAL.

GLAZING SEALANTS: COMPLY WITH ASTM C1193.

EXTERIOR DRY METHOD (GASKET SPLINE GLAZING): CUT GLAZING SPLINE TO LENGTH; INSTALL ON GLAZING PANE; SEAL CORNERS BY BUTTING TAPE AND SEALING JUNCTIONS WITH COMPATIBLE BUTYL SEALANT. PLACE SETTING BLOCKS AT MAXIMUM 1/3 POINTS WITH EDGE BLOCK NO MORE THAN 8 INCHES FROM CORNERS. REST GLAZING ON SETTING BLOCKS AND PUSH AGAINST FIXED STOP WITH SUFFICIENT PRESSURE TO ATTAIN FULL CONTACT.

INSTALL REMOVABLE STOPS WITHOUT DISPLACING GLAZING SPLINE. EXERT PRESSURE FOR FULL CONTINUOUS CONTACT. TRIM PROTRUDING TAPE EDGE.

EXTERIOR AND INTERIOR WET METHOD (SEALANT AND SEALANT) INSTALLATION: PLACE SETTING BLOCKS AT MAXIMUM 1/3 POINTS AND INSTALL GLAZING PANE OR UNIT. INSTALL REMOVABLE STOPS WITH GLAZING CENTERED IN SPACE BY INSERTING SPACER SHIMS BOTH SIDES AT 24 INCHES INTERVALS, 1/4 INCH BELOW SIGHT LINE. FILL GAPS BETWEEN GLAZING AND STOPS WITH ELASTOMERIC GLAZING SEALANT TO DEPTH OF BITE ON GLAZING, BUT NOT MORE THAN 3/8 INCH BELOW SIGHT LINE TO ENSURE FULL CONTACT WITH GLAZING AND CONTINUE THE AIR AND VAPOR SEAL. APPLY SEALANT TO UNIFORM LINE. FLUSH WITH SIGHT LINE. TOOL OR WIPE SEALANT SURFACE SMOOTH.

INTERIOR DRY METHOD (TAPE AND TAPE) INSTALLATION: CUT GLAZING TAPE TO LENGTH AND SET AGAINST PERMANENT STOPS, PROJECTING 1/16 INCH ABOVE SIGHT LINE. PLACE SETTING BLOCKS AT MAXIMUM 1/3 POINTS WITH EDGE BLOCK NO MORE THAN 6 INCHES FROM CORNERS. REST GLAZING ON SETTING BLOCKS AND PUSH AGAINST TAPE FOR FULL CONTACT AT PERIMETER OF PANE OR UNIT. PLACE GLAZING TAPE ON FREE PERIMETER OF GLAZING IN SAME MANNER DESCRIBED ABOVE. INSTALL REMOVABLE STOP WITHOUT DISPLACEMENT OF TAPE. EXERT PRESSURE ON TAPE FOR FULL CONTINUOUS CONTACT. KNIFE TRIM PROTRUDING TAPE.

FINAL BACKFILL: BACKFILL PLACED OVER INITIAL BACKFILL TO FILL A TRENCH. BASE COURSE: COURSE PLACED BETWEEN THE SUBBASE COURSE AND HOT-MIX ASPHALT PAVING. BEDDING COURSE: COURSE PLACED OVER THE EXCAVATED SUBGRADE IN A TRENCH BEFORE LAYING PIPE.

BORROW SOIL: SATISFACTORY SOIL IMPORTED FROM OFF-SITE FOR USE AS FILL OR BACKFILL. DRAINAGE COURSE: COURSE SUPPORTING THE SLAB-ON-GRADE THAT ALSO MINIMIZES UPWARD CAPILLARY FLOW OF PORE WATER.

EXCAVATION: REMOVAL OF MATERIAL ENCOUNTERED ABOVE SUBGRADE ELEVATIONS. THIS WORK SHALL INCLUDE THE REMOVAL OF THE EXISTING ROCK AND FILL MATERIAL AS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS, INCLUDING THE BUILDING, WALLS, UTILITIES, FOUNDATIONS, ROADWAYS, SIDEWALK AND ALL OTHER STRUCTURES THAT ARE CONSTRUCTED BELOW EXISTING GRADE. SOIL MATERIALS USED TO RAISE EXISTING GRADES, ROCK MATERIAL IN BEDS, LEDGES, UNSTRATIFIED MASSES, CONGLOMERATE DEPOSITS, AND BOULDERS OF ROCK MATERIAL THAT EXCEED 1 CU. YD. FOR BULK EXCAVATION OR 3/4 CU. YD. FOR FOOTING, TRENCH, AND PIT EXCAVATION THAT CANNOT BE REMOVED BY ROCK EXCAVATING EQUIPMENT EQUIVALENT TO THE FOLLOWING IN SIZE AND PERFORMANCE RATINGS, WITHOUT SYSTEMATIC DRILLING, RAM HAMMERING, RIPPING, OR BLASTING, WHEN PERMITTED.

EXCAVATION OF FOOTINGS, TRENCHES, AND PITS: LATE-MODEL, TRACK-MOUNTED HYDRAULIC EXCAVATOR, EQUIPPED WITH A 42-INCH-WIDE, MAXIMUM, SHORT-TIP-RADIUS ROCK BUCKET; RATED AT NOT LESS THAN 138-HP FLYWHEEL POWER WITH BUCKET-CURLING FORCE OF NOT LESS THAN 28,090 LBF AND STICK-CROWD FORCE OF NOT LESS THAN 18,650 LBF; MEASURED ACCORDING TO SAE J-1179.

BULK EXCAVATION: LATE-MODEL, TRACK-MOUNTED LOADER, RATED AT NOT LESS THAN 210-HP FLYWHEEL POWER AND DEVELOPING A MINIMUM OF 48,510-LBF BREAKOUT FORCE WITH A GENERAL-PURPOSE BARE BUCKET; MEASURED ACCORDING TO SAE J-732. ROCK MATERIAL IN BEDS, LEDGES, UNSTRATIFIED MASSES, CONGLOMERATE DEPOSITS, AND BOULDERS OF ROCK MATERIAL 3/4 CU. YD. OR MORE IN VOLUME THAT WHEN TESTED BY AN INDEPENDENT GEOTECHNICAL TESTING AGENCY, ACCORDING TO ASTM D 1586, EXCEEDS A STANDARD PENETRATION RESISTANCE OF 100 BLOWS / 2 INCHES.

STRUCTURES: BUILDINGS, FOOTINGS, FOUNDATIONS, RETAINING WALLS, SLABS, TANKS, CURBS, MECHANICAL AND ELECTRICAL APPURTENANCES, OR OTHER MAN-MADE STATIONARY FEATURES CONSTRUCTED ABOVE OR BELOW THE GROUND SURFACE.

SUBBASE COURSE: COURSE PLACED BETWEEN THE SUBGRADE AND BASE COURSE FOR HOT-MIX ASPHALT PAVEMENT, OR COURSE PLACED BETWEEN THE SUBGRADE AND A CEMENT CONCRETE PAVEMENT OR A CEMENT CONCRETE OR HOT-MIX ASPHALT WALK.

SUBGRADE: SURFACE OR ELEVATION REMAINING AFTER COMPLETING EXCAVATION, OR TOP SURFACE OF A FILL OR BACKFILL IMMEDIATELY BELOW SUBBASE, DRAINAGE FILL, OR TOPSOIL MATERIALS.

UTILITIES: ON-SITE UNDERGROUND PIPES, CONDUITS, DUCTS, AND CABLES, AS WELL AS UNDERGROUND SERVICES WITHIN BUILDINGS.

COMPATIBILITY: PROVIDE MATERIALS FOR USE WITHIN EACH PAINT SYSTEM THAT ARE COMPATIBLE WITH ONE (1) ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.

FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.

PRODUCTS: REGULATORY COMPLIANCE. ALL PAINTS AND COATINGS MANUFACTURED AFTER MAY 1, 2008 MUST COMPLY WITH NEW STATE OF CONNECTICUT VOC REGULATIONS.

PREPARATION AND WORKMANSHIP: COMPLY WITH REQUIREMENTS IN "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL" FOR PRODUCTS AND PAINT SYSTEMS INDICATED.

COMPATIBILITY: PROVIDE MATERIALS FOR USE WITHIN EACH PAINT SYSTEM THAT ARE COMPATIBLE WITH ONE (1) ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.

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FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.

INTERIOR/EXTERIOR LATEX BLOCK FILLER: MPI #4. WATER BASED PIGMENTED COATING WITH BRIDGING AND FILLING PROPERTIES FOR INTERIOR OR EXTERIOR CONCRETE MASONRY UNITS.

INTERIOR LATEX PRIMER/SEALER: MPI #50. WATER BASED PIGMENTED PRIMER/SEALER FOR NEW INTERIOR PLASTER, CONCRETE AND GYPSUM WALLBOARD.

ALKYD ANTICORROSIVE METAL PRIMER: MPI #79. SOLVENT BASED ALKYD TYPE ANTI-CORROSIVE FOR FERROUS METAL PRIMARILY FOR FIELD APPLICATION ON NEW AND REPAINTING WORK.

RUST-INHIBITIVE PRIMER (WATER BASED): MPI #107. WATER BASED ANTI-CORROSIVE PRIMER FOR INTERIOR OR EXTERIOR FERROUS METALS EXPOSED TO MILDLY CORROSIVE ENVIRONMENTS.

WATERBORNE GALVANIZED-METAL PRIMER: MPI #134. WATER BASED ANTI-CORROSIVE PRIMER FOR CLEANED ETCHED GALVANIZED METAL.

QUICK-DRYING PRIMER FOR ALUMINUM: MPI #95. SOLVENT BASED ALKYD OR MODIFIED ALKYD Q.D. ANTI-CORROSIVE PRIMER FOR USE ON PREPARED INTERIOR OR EXTERIOR ALUMINUM SURFACES.

INTERIOR LATEX (EGGSHHELL): MPI #52 (GLOSS LEVEL 3). WATER BASED LATEX-BASED PAINT USED ON PRIMED/SEALED INTERIOR GYPSUM BOARD, AND ON PRIMED WOOD, AND METALS.

INTERIOR LATEX (GLOSS): MPI #114 (GLOSS LEVEL 6, EXCEPT MINIMUM GLOSS OF 65 UNITS AT 60 DEGREE). WATER BASED CO-POLYMER EMULSION TYPE, PIGMENTED, GLOSS COATING FOR INTERIOR PRIMED WOOD, ALUMINUM.

EXTERIOR ALKYD ENAMEL (GLOSS): MPI #9 (GLOSS LEVEL 6). ALKYD BASED PAINT FOR USE ON NEW AND PREVIOUSLY PAINTED PRIMED EXTERIOR WOOD AND METAL SURFACES.

ALUMINUM PAINT: MPI #1. ALIPHATIC SOLVENT BASED COATING OF VARNISH OR ALKYD BINDER COMBINED WITH ALUMINUM PIGMENT. USED FOR INTERIOR AND EXTERIOR APPLICATIONS TO WOOD, METALS, BITUMINOUS COATED SURFACES.

PREPARATION: EXAMINE SUBSTRATES AND CONDITIONS, WITH APPLICATOR PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR MAXIMUM MOISTURE CONTENT AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK.

COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL" APPLICABLE TO SUBSTRATES INDICATED.

CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF PAINTS, INCLUDING DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS AND ENCAPSULANTS.

REMOVE INCOMPATIBLE PRIMERS AND REPRIME SUBSTRATE WITH COMPATIBLE PRIMERS AS REQUIRED TO PRODUCE PAINT SYSTEMS INDICATED.

CONCRETE MASONRY SUBSTRATES: REMOVE EFFLORESCENCE AND CHALK. DO NOT PAINT SURFACES IF MOISTURE CONTENT OR ALKALINITY OF SURFACES TO BE PAINTED EXCEEDS THAT PERMITTED IN MANUFACTURER'S WRITTEN INSTRUCTIONS.

STEEL SUBSTRATES: REMOVE RUST AND LOOSE MILL SCALE. CLEAN USING METHODS RECOMMENDED IN WRITING BY PAINT MANUFACTURER.

ALUMINUM SUBSTRATES: REMOVE SURFACE OXIDATION.

GYPSUM BOARD SUBSTRATES: DO NOT BEGIN PAINT APPLICATION UNTIL FINISHING COMPOUND IS DRY AND SANDED SMOOTH.

APPLICATION: APPLY PAINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. USE APPLICATORS AND TECHNIQUES SUITED FOR PAINT AND SUBSTRATE INDICATED.

31 20 00 - EARTHWORK SUMMARY: THIS SECTION INCLUDES THE FOLLOWING: PREPARING SUBGRADES FOR SLABS-ON-GRADE, WALKS, PAVEMENTS, LANDSCAPING, LAWNS AND PLANTINGS. DRAINAGE COURSE FOR SLABS-ON-GRADE. SUBBASE COURSE FOR CONCRETE WALKS AND PAVEMENTS. SUBBASE AND BASE COURSE FOR ASPHALT PAVING.

DEFINITIONS: BACKFILL: SOIL MATERIAL USED TO FILL AN EXCAVATION.

INITIAL BACKFILL: BACKFILL PLACED BESIDE AND OVER PIPE IN A TRENCH, INCLUDING HAUNCHES TO SUPPORT SIDES OF PIPE.

FINAL BACKFILL: BACKFILL PLACED OVER INITIAL BACKFILL TO FILL A TRENCH.

BASE COURSE: COURSE PLACED BETWEEN THE SUBBASE COURSE AND HOT-MIX ASPHALT PAVING.

BEDDING COURSE: COURSE PLACED OVER THE EXCAVATED SUBGRADE IN A TRENCH BEFORE LAYING PIPE.

BORROW SOIL: SATISFACTORY SOIL IMPORTED FROM OFF-SITE FOR USE AS FILL OR BACKFILL.

DRAINAGE COURSE: COURSE SUPPORTING THE SLAB-ON-GRADE THAT ALSO MINIMIZES UPWARD CAPILLARY FLOW OF PORE WATER.

EXCAVATION: REMOVAL OF MATERIAL ENCOUNTERED ABOVE SUBGRADE ELEVATIONS. THIS WORK SHALL INCLUDE THE REMOVAL OF THE EXISTING ROCK AND FILL MATERIAL AS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS, INCLUDING THE BUILDING, WALLS, UTILITIES, FOUNDATIONS, ROADWAYS, SIDEWALK AND ALL OTHER STRUCTURES THAT ARE CONSTRUCTED BELOW EXISTING GRADE. SOIL MATERIALS USED TO RAISE EXISTING GRADES, ROCK MATERIAL IN BEDS, LEDGES, UNSTRATIFIED MASSES, CONGLOMERATE DEPOSITS, AND BOULDERS OF ROCK MATERIAL THAT EXCEED 1 CU. YD. FOR BULK EXCAVATION OR 3/4 CU. YD. FOR FOOTING, TRENCH, AND PIT EXCAVATION THAT CANNOT BE REMOVED BY ROCK EXCAVATING EQUIPMENT EQUIVALENT TO THE FOLLOWING IN SIZE AND PERFORMANCE RATINGS, WITHOUT SYSTEMATIC DRILLING, RAM HAMMERING, RIPPING, OR BLASTING, WHEN PERMITTED.

EXCAVATION OF FOOTINGS, TRENCHES, AND PITS: LATE-MODEL, TRACK-MOUNTED HYDRAULIC EXCAVATOR, EQUIPPED WITH A 42-INCH-WIDE, MAXIMUM, SHORT-TIP-RADIUS ROCK BUCKET; RATED AT NOT LESS THAN 138-HP FLYWHEEL POWER WITH BUCKET-CURLING FORCE OF NOT LESS THAN 28,090 LBF AND STICK-CROWD FORCE OF NOT LESS THAN 18,650 LBF; MEASURED ACCORDING TO SAE J-1179.

BULK EXCAVATION: LATE-MODEL, TRACK-MOUNTED LOADER, RATED AT NOT LESS THAN 210-HP FLYWHEEL POWER AND DEVELOPING A MINIMUM OF 48,510-LBF BREAKOUT FORCE WITH A GENERAL-PURPOSE BARE BUCKET; MEASURED ACCORDING TO SAE J-732. ROCK MATERIAL IN BEDS, LEDGES, UNSTRATIFIED MASSES, CONGLOMERATE DEPOSITS, AND BOULDERS OF ROCK MATERIAL 3/4 CU. YD. OR MORE IN VOLUME THAT WHEN TESTED BY AN INDEPENDENT GEOTECHNICAL TESTING AGENCY, ACCORDING TO ASTM D 1586, EXCEEDS A STANDARD PENETRATION RESISTANCE OF 100 BLOWS / 2 INCHES.

STRUCTURES: BUILDINGS, FOOTINGS, FOUNDATIONS, RETAINING WALLS, SLABS, TANKS, CURBS, MECHANICAL AND ELECTRICAL APPURTENANCES, OR OTHER MAN-MADE STATIONARY FEATURES CONSTRUCTED ABOVE OR BELOW THE GROUND SURFACE.

SUBBASE COURSE: COURSE PLACED BETWEEN THE SUBGRADE AND BASE COURSE FOR HOT-MIX ASPHALT PAVEMENT, OR COURSE PLACED BETWEEN THE SUBGRADE AND A CEMENT CONCRETE PAVEMENT OR A CEMENT CONCRETE OR HOT-MIX ASPHALT WALK.

SUBGRADE: SURFACE OR ELEVATION REMAINING AFTER COMPLETING EXCAVATION, OR TOP SURFACE OF A FILL OR BACKFILL IMMEDIATELY BELOW SUBBASE, DRAINAGE FILL, OR TOPSOIL MATERIALS.

UTILITIES: ON-SITE UNDERGROUND PIPES, CONDUITS, DUCTS, AND CABLES, AS WELL AS UNDERGROUND SERVICES WITHIN BUILDINGS.

COMPATIBILITY: PROVIDE MATERIALS FOR USE WITHIN EACH PAINT SYSTEM THAT ARE COMPATIBLE WITH ONE (1) ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.

FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.

PRODUCTS: REGULATORY COMPLIANCE. ALL PAINTS AND COATINGS MANUFACTURED AFTER MAY 1, 2008 MUST COMPLY WITH NEW STATE OF CONNECTICUT VOC REGULATIONS.

PREPARATION AND WORKMANSHIP: COMPLY WITH REQUIREMENTS IN "MPI ARCHITECTURAL PAINTING SPECIFICATION MANUAL" FOR PRODUCTS AND PAINT SYSTEMS INDICATED.

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12-BY-12-INCH SAMPLE OF DRAINAGE FABRIC.

12-BY-12-INCH SAMPLE OF SEPARATION FABRIC.

MATERIAL TEST REPORTS: FROM A QUALIFIED TESTING AGENCY INDICATING AND INTERPRETING TEST RESULTS FOR COMPLIANCE OF THE FOLLOWING WITH REQUIREMENTS INDICATED:

CLASSIFICATION AND GRAIN SIZE ANALYSIS ACCORDING TO ASTM D 2487 AND ASTM D

PLACE SUBBASE AND BASE COURSE 6 INCHES OR LESS IN COMPACTED THICKNESS IN A SINGLE LAYER, UNLESS OTHERWISE DIRECTED.

PLACE SUBBASE AND BASE COURSE THAT EXCEEDS 6 INCHES IN COMPACTED THICKNESS IN LAYERS OF EQUAL THICKNESS, WITH NO COMPACTED LAYER MORE THAN 6 INCHES THICK OR LESS THAN 3 INCHES THICK.

COMPACT SUBBASE AND BASE COURSE AT OPTIMUM MOISTURE CONTENT TO REQUIRED GRADES, LINES, CROSS SECTIONS, AND THICKNESS TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557.

PAVEMENT SHOULDERS: PLACE SHOULDERS ALONG EDGES OF SUBBASE AND BASE COURSE TO PREVENT LATERAL MOVEMENT. CONSTRUCT SHOULDERS, AT LEAST 12 INCHES WIDE, OF SATISFACTORY SOIL MATERIALS AND COMPACT SIMULTANEOUSLY WITH EACH SUBBASE AND BASE LAYER TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 1557.

TRAFFIC CONTROL: PLACE DRAINAGE COURSE ON SUBGRADES FREE OF MUD, FROST, SNOW, OR ICE. ON PREPARED SUBGRADE, PLACE AND COMPACT DRAINAGE COURSE UNDER CAST-IN-PLACE CONCRETE SLABS-ON-GRADE AS FOLLOWS:

PLACE DRAINAGE COURSE 6 INCHES OR LESS IN COMPACTED THICKNESS IN A SINGLE LAYER, UNLESS OTHERWISE NOTED.

PLACE DRAINAGE COURSE THAT EXCEEDS 6 INCHES IN COMPACTED THICKNESS IN LAYERS OF EQUAL THICKNESS, WITH NO COMPACTED LAYER MORE THAN 6 INCHES THICK OR LESS THAN 3 INCHES THICK.

COMPACT EACH LAYER OF DRAINAGE COURSE TO REQUIRED CROSS SECTIONS AND THICKNESSES TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698.

FIELD QUALITY CONTROL:

TESTING AGENCY: THE OWNER WILL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY-CONTROL TESTING AND APPROVAL DETERMINATIONS AS THE SOILS ENGINEER. THE CONTRACTOR IS TO COOPERATE WITH THE SOILS CONSULTANT IN ALL RESPECTS AND SHALL PROVIDE SAMPLES OF EACH TYPE OF FILL MATERIAL USED SO THAT VARIOUS TESTS MAY BE PERFORMED TO ASCERTAIN COMPLIANCE WITH THE SPECIFICATIONS.

ALLOW TESTING AGENCY TO INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS.

FOOTING SUBGRADE: AT FOOTING SUBGRADES, AT LEAST ONE TEST OF EACH SOIL STRATUM WILL BE PERFORMED TO VERIFY DESIGN BEARING CAPACITIES. SUBSEQUENT VERIFICATION AND APPROVAL OF OTHER FOOTING SUBGRADES MAY BE BASED ON A VISUAL COMPARISON OF SUBGRADE WITH TESTED SUBGRADE WHEN APPROVED BY ARCHITECT/ENGINEER.

TESTING AGENCY WILL TEST COMPACTION OF SOLS IN PLACE ACCORDING TO ASTM D 1556, ASTM D 2167, ASTM D 2922, AND ASTM D 2937, AS APPLICABLE. TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:

PAVED AND BUILDING SLAB AREAS: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST FOR EVERY 2000 SQ. FT. OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.

FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 100 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 3 TESTS.

TRENCH BACKFILL: AT EACH COMPACTED INITIAL AND FINAL BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 150 FEET OR LESS OF TRENCH LENGTH, BUT NO FEWER THAN 2 TESTS.

WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED WITH NO ADDITIONAL COMPENSATION FROM THE OWNER.

PROTECTION:

PROTECT NEWLY GRADED AREAS FROM TRAFFIC, FREEZING, AND EROSION. KEEP FREE OF TRASH AND DEBRIS. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER CONDITIONS. SCARIFY OR REMOVE AND REPLACE SOIL MATERIAL TO DEPTH AS DIRECTED BY ENGINEER; RESHAPE AND RECOMPACT. WHERE SETTLING OCCURS BEFORE PROJECT CORRECTION PERIOD ELAPSES, REMOVE FINISHED SURFACING, BACKFILL.

WITH ADDITIONAL SOIL MATERIAL, COMPACT, AND RECONSTRUCT SURFACING. RESTORE APPEARANCE, QUALITY, AND CONDITION OF FINISHED SURFACING TO MATCH ADJACENT WORK, AND ELIMINATE EVIDENCE OF RESTORATION TO GREATEST EXTENT POSSIBLE.

DISPOSAL OF SURPLUS AND WASTE MATERIALS:

REMOVE SURPLUS SATISFACTORY SOIL AND WASTE MATERIAL, INCLUDING EXCESS TOPSOIL, UNSATISFACTORY SOIL, EXCESS MATERIALS, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNERS PROPERTY. REMOVE WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNERS PROPERTY.

321313 CONCRETE PAVEMENT

SUMMARY:

THIS SECTION INCLUDES EXTERIOR CEMENT CONCRETE PAVEMENT FOR THE FOLLOWING: DRIVEWAYS AND ROADWAYS, PARKING LOTS, CURBS AND GUTTERS, WALKWAYS.

RELATED SECTIONS INCLUDE DIVISION 31 SECTION "EARTHWORK" FOR SUBGRADE PREPARATION, GRADING, AND SUBBASE COURSE.

DEFINITIONS:

CEMENTITIOUS MATERIALS: PORTLAND CEMENT ALONE OR IN COMBINATION WITH ONE OR MORE OF BLENDED HYDRAULIC CEMENT, EXPANSIVE HYDRAULIC CEMENT, FLY ASH AND OTHER POZZOLANS, GROUND GRANULATED BLAST-FURNACE SLAG, AND SILICA FUME.

SUBMITTALS:

PRODUCT DATA: FOR EACH TYPE OF MANUFACTURED MATERIAL AND PRODUCT INDICATED. DESIGN MIXES: FOR EACH CONCRETE PAVEMENT MIX. INCLUDE ALTERNATE MIX DESIGNS WHEN CHARACTERISTICS OF MATERIALS, PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT ADJUSTMENTS

SAMPLES: 10-LB (4.5-KG) SAMPLE OF EXPOSED AGGREGATE. MATERIAL TEST REPORTS: FROM A QUALIFIED TESTING AGENCY INDICATING AND INTERPRETING TEST RESULTS FOR COMPLIANCE OF THE FOLLOWING WITH REQUIREMENTS INDICATED, BASED ON COMPREHENSIVE TESTING OF CURRENT MATERIALS.

MATERIAL CERTIFICATES: SIGNED BY MANUFACTURERS CERTIFYING THAT EACH OF THE FOLLOWING MATERIALS COMPLIES WITH REQUIREMENTS: CEMENTITIOUS MATERIALS AND AGGREGATES, STEEL REINFORCEMENT AND REINFORCEMENT ACCESSORIES, ADMIXTURES, CURING COMPOUNDS, APPLIED FINISH MATERIALS, BONDING AGENT OR ADHESIVE, JOINT FILLERS, MINUTES OF PREINSTALLATION CONFERENCE.

QUALITY ASSURANCE:

INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO HAS COMPLETED PAVEMENT WORK SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE.

MANUFACTURER QUALIFICATIONS: MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS COMPLYING WITH ASTM C 94 REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT. MANUFACTURER MUST BE CERTIFIED ACCORDING TO THE NATIONAL READY MIX CONCRETE ASSOCIATIONS PLANT CERTIFICATION PROGRAM.

TESTING AGENCY QUALIFICATIONS: THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN INDEPENDENT TESTING AGENCY, ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, QUALIFIED ACCORDING TO ASTM C 1077 AND ASTM E 329 TO CONDUCT THE TESTING INDICATED, AS DOCUMENTED ACCORDING TO ASTM E 648.

SOURCE LIMITATIONS: OBTAIN EACH TYPE OR CLASS OF CEMENTITIOUS MATERIAL OF THE SAME BRAND FROM THE SAME MANUFACTURER'S PLANT AND EACH AGGREGATE FROM ONE SOURCE.

ACI PUBLICATIONS: COMPLY WITH ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE," UNLESS MODIFIED BY THE REQUIREMENTS OF THE QUALIFIED DOCUMENTS.

CONCRETE TESTING SERVICE: ENGAGE A QUALIFIED INDEPENDENT TESTING AGENCY TO PERFORM MATERIAL EVALUATION TESTS AND TO DESIGN CONCRETE MIXES.

PREINSTALLATION CONFERENCE: CONDUCT CONFERENCE AT PROJECT SITE TO COMPLY WITH REQUIREMENTS IN DIVISION 1 SECTION "PROJECT MEETINGS" BEFORE SUBMITTING DESIGN MIXES, REVIEW CONCRETE PAVEMENT MIX DESIGN AND EXAMINE PROCEDURES FOR ENSURING QUALITY OF CONCRETE MATERIALS. REQUIRE REPRESENTATIVES OF EACH ENTITY DIRECTLY CONCERNED WITH CONCRETE PAVEMENT TO ATTEND, INCLUDING THE FOLLOWING: CONTRACTOR'S SUPERINTENDENT, INDEPENDENT TESTING AGENCY RESPONSIBLE FOR CONCRETE DESIGN MIXES, READY-MIX CONCRETE PRODUCER, CONCRETE SUBCONTRACTOR.

PROJECT CONDITIONS:

TRAFFIC CONTROL: MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR OTHER CONSTRUCTION ACTIVITIES.

PRODUCTS:

FORM MATERIALS: PLYWOOD, METAL, METAL-FRAMED PLYWOOD, OR OTHER APPROVED PANEL-TYPE MATERIALS TO PROVIDE FULL-DEPTH, CONTINUOUS, STRAIGHT, SMOOTH EXPOSED SURFACES. USE FLEXIBLE OR CURVED FORMS FOR CURVES OF A RADIUS 100 FEET (30.3 M) OR LESS. FORM-RELEASE AGENT: COMMERCIALY FORMULATED FORM-RELEASE AGENT THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES.

STEEL REINFORCEMENT:

PLAIN-STEEL WELDED WIRE FABRIC: ASTM A 185, FABRICATED FROM AS-DRAWN STEEL WIRE INTO FLAT SHEETS.

- A. DEFORMED-STEEL WELDED WIRE FABRIC: ASTM A 497, FLAT SHEET.
B. EPOXY-COATED WELDED WIRE FABRIC: ASTM A 884A/884M, CLASS A, PLAIN STEEL.
C. REINFORCEMENT BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420), DEFORMED.
E. EPOXY-COATED REINFORCEMENT BARS: ASTM A 775/A 775M, WITH ASTM A 615/A 615M, GRADE 60 (GRADE 420), DEFORMED BARS.

F. STEEL BAR MATS: ASTM A 184/A 184M, WITH ASTM A 615/A 615M, GRADE 60 (GRADE 420), DEFORMED BARS; ASSEMBLED WITH CLIPS.
G. PLAIN STEEL WIRE: ASTM A 82, AS DRAWN.
H. EPOXY-COATED WIRE: ASTM A 884/A 884M, CLASS A COATED, PLAIN STEEL.

I. JOINT DOWEL BARS: PLAIN STEEL BARS, ASTM A 615/A 615M, GRADE 60 (GRADE 420). CUT BARS TRUE TO LENGTH WITH ENDS SQUARE AND FREE OF BURRS.
J. EPOXY-COATED JOINT DOWEL BARS: ASTM A 775/A 775M, WITH ASTM A 615/A 615M, GRADE 60 (GRADE 420), PLAIN STEEL BARS.

K. TIE BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420), DEFORMED.
L. HOOK BOLTS: ASTM A 307, GRADE A (ASTM F 568M, PROPERTY CLASS 4.6), INTERNALLY AND EXTERNALLY THREADED. DESIGN HOOK-BOLT JOINT ASSEMBLY TO HOLD COUPLING AGAINST PAVEMENT FORM AND IN POSITION DURING CONCRETING OPERATIONS, AND TO PERMIT REMOVAL WITHOUT DAMAGE TO CONCRETE OR HOOK BOLT.

M. BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCEMENT BARS, WELDED WIRE FABRIC, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSIS "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OR FIBER-REINFORCED CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE, AND AS FOLLOWS:

- 1. EQUIP WIRE BAR SUPPORTS WITH SAND PLATES OR HORIZONTAL RUNNERS WHERE BASE MATERIAL WILL NOT SUPPORT CHAIR LEGS.
2. FOR EPOXY-COATED REINFORCEMENT, USE EPOXY-COATED OR OTHER DIELECTRIC-POLYMER COATED WIRE BAR SUPPORTS.
N. EPOXY REPAIR COATING: LIQUID TWO-PART EPOXY REPAIR COATING, COMPATIBLE WITH EPOXY COATING ON REINFORCEMENT.
CONCRETE MATERIALS:
USE THE SAME BRAND AND TYPE OF CEMENTITIOUS MATERIAL FROM THE SAME MANUFACTURER THROUGHOUT THE PROJECT.
PORTLAND CEMENT: ASTM C 150, TYPE I OR II.
1. FLY ASH: ASTM C 618, CLASS F OR C.
2. GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C 989, GRADE 100 OR 120.
AGGREGATE: ASTM C 33, UNIFORMLY GRADED, FROM A SINGLE SOURCE, WITH COARSE AGGREGATE AS FOLLOWS:
1. CLASS: 4S.
2. MAXIMUM AGGREGATE SIZE: 1 INCH (25 MM) NOMINAL.
3. DO NOT USE FINE OR COARSE AGGREGATES CONTAINING SUBSTANCES THAT CAUSE SPALLING.
EXPOSED AGGREGATE: SELECTED, HARD, AND DURABLE; WASHED; FREE OF MATERIAL THAT REACTS WITH CEMENTITIOUS MATERIAL OR CAUSES STAINING; FROM A SINGLE SOURCE, WITH GAP GRADED COARSE AGGREGATE AS FOLLOWS:
1. AGGREGATE SIZES: 1/2 TO 3/4 INCH (13 TO 19 MM) NOMINAL.
WATER: ASTM C 84.

ADMIXTURES:

ADMIXTURES CERTIFIED BY MANUFACTURER TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENT AND TO BE COMPATIBLE WITH OTHER ADMIXTURES.
AIR-ENTRAINING ADMIXTURE: ASTM C 260.
WATER-REDUCING ADMIXTURE: ASTM C 494, TYPE A.
HIGH-RANGE, WATER-REDUCING ADMIXTURE: ASTM C 494, TYPE F.
WATER-REDUCING AND ACCELERATING ADMIXTURE: ASTM C 494, TYPE E.
WATER-REDUCING AND RETARDING ADMIXTURE: ASTM C 494, TYPE D.

CURING MATERIALS:
ABSORPTIVE COVER: AASHTO M 182, CLASS 2, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ./SQ. YD. (305 G/SQ. M) DRY.
MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET.
WATER: POTABLE.
EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
CLEAR SOLVENT-BORNE LIQUID-MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B.
WHITE WATERBORNE MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B.
AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- EVAPORATION RETARDER: 1) CIMFILM - AXIM CONCRETE TECHNOLOGIES; 2) FINISHING AID CONCENTRATE - BURKE GROUP, LLC (THE); 3) SPRAY-FILM - CHEMMASTERS; 4) AQUAFILM - CONSPREC MARKETING & MANUFACTURING CO., INC.; 5) SURE FILM - DAYTON SUPERIOR CORPORATION; 6) EUCO-BAR - EUCLID CHEMICAL CO. 7) VAPOR AID - KAUFMAN PRODUCTS, INC.; 8) LAMBDO SKIN - LAMBERT CORPORATION; 9) E-CON - L&M CONSTRUCTION CHEMICALS, INC.; 10) CONFILM - MASTER BUILDERS, INC.; 11) WATERHOLD - METALCRETE INDUSTRIES; 12) RICH FILM - RICHMOND SCREW ANCHOR CO. 13) SIKAFILM - SIKA CORPORATION; 14) FINISHING AID - SYMONS CORPORATION; 15) CERTI-VEX ENVIOASISIT - VEXCON CHEMICALS, INC.
CLEAR SOLVENT-BORNE LIQUID-MEMBRANE-FORMING CURING COMPOUND: 1) AH CURING COMPOUND #2 DR - ANTI-HYDRO INTERNATIONAL, INC.; 2) RES-CURE ALL RESIN - BURKE GROUP, LLC (THE); 3) RX CURE - CONSPREC MARKETING & MANUFACTURING CO., INC.; 4) DAY-CHEM REZ CURE - DAYTON SUPERIOR CORPORATION; 5) KUREZ DR - EUCLID CHEMICAL CO.; 6) NITOCURE S - FOSROCK; 7) #64 RESIN CURE - LAMBERT CORPORATION; 8) L&M CURE DR - L&M CONSTRUCTION CHEMICALS, INC.

- 9) 3100-CLEAR - W. R. MEADOWS, INC.; 10) SEAL N KURE FDR - METALCRETE INDUSTRIES; 11) RICH CURE - RICHMOND SCREW ANCHOR CO. 12) RESI-CHEM C309 - SYMONS CORPORATION; 13) HORNCURE 30 - TAMMS INDUSTRIES CO., DIV. OF LAPORTE CONSTRUCTION CHEMICALS NORTH AMERICA, INC.; 14) UNI RES 150 - UNITEK; 15) CERTI-VEX RC - VEXCON CHEMICALS, INC.
CLEAR WATERBORNE MEMBRANE-FORMING CURING COMPOUND: 1) AH CURING COMPOUND #2 DR WP - ANTI-HYDRO INTERNATIONAL, INC.; 2) AQUA RESIN CURE - BURKE GROUP, LLC (THE); 3) SAFE-CURE CLEAR - CHEMMASTERS; 4) W.B. RESIN CURE - CONSPREC MARKETING & MANUFACTURING CO., INC.; 5) DAY CHEM REZ CURE (J-11-W - DAYTON SUPERIOR CORPORATION; 6) NITOCURE S - FOSROCK; 7) AQUA KURE CLEAR - LAMBERT CORPORATION; 8) L&M CURE R - L&M CONSTRUCTION CHEMICALS, INC.; 9) 1100 CLEAR - W. R. MEADOWS, INC.; 10) RESIN CURE E - NOX-CRETE PRODUCTS GROUP, KINSMAN CORPORATION; 11) RICH CURE E - RICHMOND SCREW ANCHOR CO.; 12) RESI-CHEM CLEAR CURE - SYMONS CORPORATION; 13) HORNCURE 100 - TAMMS INDUSTRIES CO., DIV. OF LAPORTE CONSTRUCTION CHEMICALS NORTH AMERICA, INC.; 14) HYDRO CURE - UNITEK; 15) CERTI-VEX ENVIOCURE - VEXCON CHEMICALS, INC.
WHITE WATERBORNE MEMBRANE-FORMING CURING COMPOUND: 1) AH CURING COMPOUND #2 WB WP - ANTI-HYDRO INTERNATIONAL, INC.; 2) AQUA RESIN CURE - BURKE GROUP, LLC (THE); 3) W.B. RESIN CURE - CONSPREC MARKETING & MANUFACTURING CO., INC.; 4) THINFILM 450 - KAUFMAN PRODUCTS, INC.; 5) AQUA KURE-WHITE - LAMBERT CORPORATION; 6) L&M CURE R-2 - L&M CONSTRUCTION CHEMICALS, INC.; 7) 1200-WHITE - W. R. MEADOWS, INC.; 8) WHITE PIGMENTED RESIN CURE E - NOX-CRETE PRODUCTS GROUP, KINSMAN CORPORATION; 9) RICH CURE WHITE E - RICHMOND SCREW ANCHOR CO.; 10) RESI-CHEM HIGH CURE - SYMONS CORPORATION; 11) HORNCURE 200-W - TAMMS INDUSTRIES CO., DIV. OF LAPORTE CONSTRUCTION CHEMICALS NORTH AMERICA, INC.; 12) HYDRO WHITE 309 - UNITEK.

RELATED MATERIALS:

EXPANSION- AND ISOLATION-JOINT-FILLER STRIPS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER.

PAVEMENT-MARKING PAINT: ALKYD-RESIN TYPE; READY MIXED; COMPLYING WITH FS TT-P-115, TYPE I, OR AASHTO M 248, TYPE N.
GLASS BEADS: AASHTO M 247.

WHEEL STOPS: PRECAST, AIR-ENTRAINED CONCRETE; 2900-PSI (17.2-MPA) MINIMUM COMPRESSIVE STRENGTH; APPROXIMATELY 6 INCHES (150 MM) HIGH, 9 INCHES (225 MM) WIDE, AND 84 INCHES (2130 MM) LONG. PROVIDE CHAMFERED CORNERS AND DRAINAGE SLOTS ON UNDERSIDE, AND PROVIDE HOLES FOR DOWEL-ANCHORING TO SUBSTRATE.

DOWELS: GALVANIZED STEEL, DIAMETER OF 3/4 INCH (19 MM), MINIMUM LENGTH 10 INCHES (254 MM), SLIP-RESISTIVE AGGREGATE FINISH. FACTORY-GRADED, PACKAGED, RUSTPROOF, NONSLAZING, ABRASIVE AGGREGATE OF FUSED ALUMINUM-OXIDE GRANULES OR CRUSHED EMERY WITH EMERY AGGREGATE CONTAINING NOT LESS THAN 50 PERCENT ALUMINUM OXIDE AND NOT LESS THAN 25 PERCENT FERRIC OXIDE; UNAFFECTED BY FREEZING, MOISTURE, AND CLEANING MATERIALS.

BONDING AGENT: ASTM C 1059, TYPE II, NON-REDISPERSIBLE, ACRYLIC EMULSION OR STYRENE BUTADIENE.

ROCK SALT: SODIUM CHLORIDE CRYSTALS, KILN DRIED, COARSE GRADATION WITH 100 PERCENT PASSING 3/8-INCH (9.5-MM) SIEVE AND 85 PERCENT RETAINED ON NO. 8 (2.36-MM) SIEVE.

EPOXY BONDING ADHESIVE: ASTM C 881, TWO-COMPONENT EPOXY RESIN, CAPABLE OF HUMID CURING AND BONDING TO DAMP SURFACES, OF CLASS AND GRADE TO SUIT REQUIREMENTS, AND AS FOLLOWS:

- 1. TYPE: CLASS I AND II, NON-LOAD BEARING, FOR BONDING HARDENED OR FRESHLY MIXED CONCRETE TO HARDENED CONCRETE.
2. TYPE: CLASS IV AND V, LOAD BEARING, FOR BONDING HARDENED OR FRESHLY MIXED CONCRETE TO HARDENED CONCRETE.

CONCRETE MIXES:

PREPARE DESIGN MIXES, PROPORTIONED ACCORDING TO ACI 211.1 AND ACI 301, FOR EACH TYPE AND STRENGTH OF NORMAL-WEIGHT CONCRETE DETERMINED BY EITHER LABORATORY TRIAL MIXES OR FIELD EXPERIENCE.

USE A QUALIFIED INDEPENDENT TESTING AGENCY FOR PREPARING AND REPORTING PROPOSED MIX DESIGNS FOR THE TRIAL BATCH METHOD. DO NOT USE OWNERS FIELD QUALITY-CONTROL TESTING AGENCY AS THE INDEPENDENT TESTING AGENCY.

PROPORTION MIXES TO PROVIDE CONCRETE AS INDICATED ON PLANS WITH THE FOLLOWING PROPERTIES:

- 1. COMPRESSIVE STRENGTH (28 DAYS): 4500 PSI (CLASS B).
2. COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI (CLASS C).
3. SLUMP LIMIT AT POINT OF PLACEMENT: 3 INCHES.

CEMENTITIOUS MATERIALS: LIMIT PERCENTAGE, BY WEIGHT, OF CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT ACCORDING TO ACI 301 REQUIREMENTS FOR CONCRETE EXPOSED TO DEICING CHEMICALS.

ADD AIR-ENTRAINING ADMIXTURE AT MANUFACTURER'S PRESCRIBED RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING AN AIR CONTENT OF 2.5 TO 4.5 PERCENT.

COLORING AGENT: ADD COLORING AGENT TO MIX ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

CONCRETE MIXING:

READY-MIXED CONCRETE: COMPLY WITH REQUIREMENTS AND WITH ASTM C 94 AND ASTM C 1116. WHEN AIR TEMPERATURE IS BETWEEN 85 DEG F (30 DEG C) AND 90 DEG F (32 DEG C), REDUCE MIXING AND DELIVERY TIME FROM 1-1/2 HOURS TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90 DEG F (32 DEG C), REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.

PROJECT-SITE MIXING: COMPLY WITH REQUIREMENTS AND MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE ACCORDING TO ASTM C 94. MIX CONCRETE MATERIALS IN APPROPRIATE DRUM-TYPE BATCH MACHINE MIXER. FOR MIXERS OF 1 CU. YD. (0.76 CU. M) OR SMALLER CAPACITY, CONTINUE MIXING AT LEAST ONE AND ONE-HALF MINUTES, BUT NOT MORE THAN FIVE MINUTES AFTER INGREDIENTS ARE IN MIXER, BEFORE ANY PART OF BATCH IS RELEASED. FOR MIXERS OF CAPACITY LARGER THAN 1 CU. YD. (0.76 CU. M), INCREASE MIXING TIME BY 15 SECONDS FOR EACH ADDITIONAL 1 CU. YD. (0.76 CU. M). PROVIDE BATCH TICKET FOR EACH BATCH DISCHARGED AND USED IN THE WORK, INDICATING PROJECT IDENTIFICATION NAME AND NUMBER, DATE, MIX TYPE, MIX TIME, QUANTITY, AND AMOUNT OF WATER ADDED.

EXECUTION:

PREPARATION: PROOF-ROLL PREPARED SUBBASE SURFACE TO CHECK FOR UNSTABLE AREAS AND VERIFY NEED FOR ADDITIONAL COMPACTION. PROCEED WITH PAVEMENT ONLY AFTER NONCONFORMING CONDITIONS HAVE BEEN CORRECTED AND SUBGRADE IS READY TO RECEIVE PAVEMENT. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

EDGE FORMS AND SCREED CONSTRUCTION:

SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.

STEEL REINFORCEMENT:

COMPLY WITH CRSIS "MANUAL OF STANDARD PRACTICE" FOR FABRICATING REINFORCEMENT AND WITH RECOMMENDATIONS IN CRSIS "PLACING REINFORCING BARS" FOR PLACING AND SUPPORTING REINFORCEMENT. APPLY EPOXY REPAIR COATING TO UNCOATED OR DAMAGED SURFACES OF EPOXY-COATED REINFORCEMENT. CLEAN REINFORCEMENT OF LOOSE RUST AND MILL SCALE.

EARTH, ICE, OR OTHER BOND-REDUCING MATERIALS. ARRANGE, SPACE, AND SECURELY TIE BARS AND BAR SUPPORTS TO HOLD REINFORCEMENT IN POSITION DURING CONCRETE PLACEMENT. MAINTAIN MINIMUM COVER TO REINFORCEMENT. INSTALL WELDED WIRE FABRIC IN LENGTHS AS LONG AS PRACTICABLE. LAP ADJOINING PIECES AT LEAST ONE FULL MESH, AND LACE SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION.

INSTALL FABRICATED BAR MATS IN LENGTHS AS LONG AS PRACTICABLE. HANDLE UNITS TO KEEP THEM FLAT AND FREE OF DISTORTIONS. STRAIGHTEN BENDS, KINKS, AND OTHER IRREGULARITIES, OR REPLACE UNITS AS REQUIRED BEFORE PLACEMENT. SET MATS FOR A MINIMUM 2-INCH (50-MM) OVERLAP TO ADJACENT MATS.

JOINTS:

GENERAL: CONSTRUCT CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. WHEN JOINING EXISTING PAVEMENT, PLACE TRANSVERSE JOINTS TO ALIGN WITH PREVIOUSLY PLACED JOINTS, UNLESS OTHERWISE INDICATED.

CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE JOINTMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR, UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS. PROVIDE PREFORMED GALVANIZED STEEL OR PLASTIC KEYWAY-SECTION FORMS OR BULKHEAD FORMS WITH KEYS, UNLESS OTHERWISE INDICATED. EMBED KEYS AT LEAST 1-1/2 INCHES (38 MM) INTO CONCRETE. CONTINUE REINFORCEMENT ACROSS CONSTRUCTION JOINTS, UNLESS OTHERWISE INDICATED. DO NOT CONTINUE REINFORCEMENT THROUGH SIDES OF PAVEMENT STRIPS, UNLESS OTHERWISE INDICATED. PROVIDE TIE BARS AT SIDES OF PAVEMENT STRIPS WHERE INDICATED. USE A BONDING AGENT AT LOCATIONS WHERE FRESH CONCRETE IS PLACED AGAINST HARDENED OR PARTIALLY HARDENED CONCRETE SURFACES. USE EPOXY BONDING ADHESIVE AT LOCATIONS WHERE FRESH CONCRETE IS PLACED AGAINST HARDENED OR PARTIALLY HARDENED CONCRETE SURFACES.

ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED. LOCATE EXPANSION JOINTS AT INTERVALS OF 20 FEET, UNLESS OTHERWISE INDICATED. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT. TERMINATE JOINT FILER LESS THAN 1/2 INCH (12 MM) OR MORE THAN 1 INCH (25 MM) BELOW FINISHED SURFACE IF JOINT SEALANT IS INDICATED. PLACE TOP OF JOINT FILLER FLUSH WITH FINISHED CONCRETE SURFACE IF JOINT SEALANT IS NOT INDICATED. FURNISH JOINT FILLERS IN ONE-PIECE LENGTHS, WHERE MORE THAN ONE LENGTH IS REQUIRED, LACE OR CLIP JOINT-FILLER SECTIONS TOGETHER. PROTECT TOP EDGE OF JOINT FILLER DURING CONCRETE PLACEMENT WITH METAL, PLASTIC, OR OTHER TEMPORARY PREFORMED CAP. REMOVE PROTECTIVE CAP AFTER CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT.

INSTALL DOWEL BARS AND SUPPORT ASSEMBLIES AT JOINTS WHERE INDICATED. LUBRICATE OR ASPHALT-COAT ONE-HALF OF DOWEL LENGTH TO PREVENT CONCRETE BONDING TO ONE SIDE OF JOINT.

CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS. SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS, AS FOLLOWS:

- 1. GROOVED JOINTS: FORM CONTRACTION JOINTS AFTER INITIAL FLOATING BY GROOVING AND FINISHING EACH EDGE OF JOINT WITH GROOVER TOOL TO THE FOLLOWING RADIUS. REPEAT GROOVING OF CONTRACTION JOINTS AFTER APPLYING SURFACE FINISHES. ELIMINATE GROOVER MARKS ON CONCRETE SURFACES.
A. RADIUS: 1/4 INCH (6 MM).
B. SAVED JOINTS: FORM CONTRACTION JOINTS WITH POWER SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND-RIMMED BLADES. CUT 1/8-INCH-(3-MM-) WIDE JOINTS INTO CONCRETE WHEN CUTTING ACTION WILL NOT TEAR, ABRADE, OR OTHERWISE DAMAGE SURFACE AND BEFORE DEVELOPING RANDOM CONTRACTION CRACKS.
JOINTS: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO THE FOLLOWING RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.
1. RADIUS: 1/4 INCH (6 MM).

CONCRETE PLACEMENT:

INSPECTION: BEFORE PLACING CONCRETE, INSPECT AND COMPLETE FORMWORK INSTALLATION, REINFORCEMENT STEEL, AND ITEMS TO BE EMBEDDED OR CAST IN. NOTIFY OTHER TRADES TO PERMIT INSTALLATION OF THEIR WORK, REMOVE SNOW, ICE, OR FROST FROM SUBBASE SURFACE AND REINFORCEMENT BEFORE PLACING CONCRETE. DO NOT PLACE CONCRETE ON FROZEN SURFACES. MOISTEN SUBBASE TO PROVIDE A UNIFORM DAMPENED CONDITION AT THE TIME CONCRETE IS PLACED. DO NOT PLACE CONCRETE AROUND MANHOLES OR OTHER STRUCTURES UNTIL THEY ARE AT THE REQUIRED FINISH ELEVATION AND ALIGNMENT. COMPLY WITH REQUIREMENTS AND WITH RECOMMENDATIONS IN ACI 304R FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE. DO NOT ADD WATER TO CONCRETE DURING DELIVERY, OR DURING PLACEMENT. DEPOSIT AND SPREAD CONCRETE IN A CONTINUOUS OPERATION BETWEEN TRANSVERSE JOINTS. DO NOT PUSH OR DRAG CONCRETE INTO PLACE OR USE VIBRATORS TO MOVE CONCRETE INTO PLACE. CONSOLIDATE CONCRETE BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, ROODING, OR TAMPING. USE EQUIPMENT AND PROCEDURES TO CONSOLIDATE CONCRETE ACCORDING TO RECOMMENDATIONS IN ACI 309R.

CONSOLIDATE CONCRETE ALONG FACE OF FORMS AND ADJACENT TO TRANSVERSE JOINTS WITH AN INTERNAL VIBRATOR. KEEP VIBRATOR AWAY FROM JOINT ASSEMBLIES, REINFORCEMENT, OR SIDE FORMS. USE ONLY SQUARE-FACED SHOVELS FOR HAND-SPREADING AND CONSOLIDATION. CONSOLIDATE WITH CARE TO PREVENT DISLOCATING REINFORCEMENT, DOWELS, AND JOINT DEVICES. PLACE CONCRETE IN TWO OPERATIONS; STRIKE OFF INITIAL POUR FOR ENTIRE WIDTH OF PLACEMENT AND TO THE REQUIRED DEPTH BELOW FINISH SURFACE. LAY WELDED WIRE FABRIC OR FABRICATED BAR MATS IMMEDIATELY IN FINAL POSITION. PLACE TOP LAYER OF CONCRETE, STRIKE OFF, AND SCREED. REMOVE AND REFACE PORTIONS OF BOTTOM LAYER OF CONCRETE THAT HAVE BEEN PLACED MORE THAN 15 MINUTES WITHOUT BEING COVERED BY TOP LAYER, OR USE BONDING AGENT IF APPROVED BY ARCHITECT. SCREED PAVEMENT SURFACES WITH A STRAIGHTEDGE AND STRIKE OFF. COMMENCE INITIAL FLOATING USING BULL FLOATS OR DARBIES TO FORM AN OPEN TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR SPREADING DRY-SHAKE SURFACE TREATMENTS.

CURBS AND GUTTERS: WHEN AUTOMATIC MACHINE PLACEMENT IS USED FOR CURB AND GUTTER PLACEMENT, SUBMIT REVISED MIX DESIGN AND LABORATORY TEST RESULTS THAT MEET OR EXCEED REQUIREMENTS. PRODUCE CURBS AND GUTTERS TO REQUIRED CROSS SECTION, LINES, GRADES, FINISH, AND JOINTING AS SPECIFIED FOR FORMED CONCRETE. IF RESULTS ARE NOT APPROVED, REMOVE AND REPLACE WITH FORMED CONCRETE.

SLIP-FORM PAVERS: HEN AUTOMATIC MACHINE PLACEMENT IS USED FOR PAVEMENT, SUBMIT REVISED MIX DESIGN AND LABORATORY TEST RESULTS THAT MEET OR EXCEED REQUIREMENTS. PRODUCE PAVEMENT TO REQUIRED THICKNESS, LINES, GRADES, FINISH, AND JOINTING AS REQUIRED FOR FORMED PAVEMENT. COMPACT SUBBASE AND PREPARE SUBGRADE OF SUFFICIENT WIDTH TO PREVENT DISPLACEMENT OF PAVER MACHINE DURING OPERATIONS WHEN ADJOINING PAVEMENT LANES ARE PLACED IN SEPARATE POURS, DO NOT OPERATE EQUIPMENT ON CONCRETE UNTIL PAVEMENT HAS ATTAINED 85 PERCENT OF ITS 28-DAY COMPRESSIVE STRENGTH.

COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES. WHEN AIR TEMPERATURE HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40 DEG F (4.4 DEG C), UNIFORMLY HEAT WATER AND

DOOR AND FRAME SCHEDULE

SEE DWG. A-010 FOR DOOR MATERIAL LEGEND AND FOR REFERENCE NOTES IN REFERENCE TO DOORS & FRAMES.

ALUMINUM FRAME SCHEDULE

DOOR NUMBER	ROOM NAME	ROOM NUMBER	DOOR TYPE	DOOR MATL	FIRE RAT'G	DOOR WIDTH	DOOR HEIGHT	FRAME TYPE	HDWR SET	SIGN TYPE	REMARKS
G01.1	STAIR-1 (LEVEL-1)	G01	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
G02.1	STORAGE	G02	D-1	H.M.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
G03.1	ELECTRIC ROOM	G03	D-1	H.M.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
G04.1	STAIR-2 (LEVEL-1)	G04	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
101.1	STAIR-1 (LEVEL-2)	101	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
102.1	STORAGE	102	D-1	H.M.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
103.1	STAIR-2 (LEVEL-2)	103	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
201.1	STAIR-1 (LEVEL-3)	201	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
202.1	STORAGE	202	D-1	H.M.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
203.1	STAIR-2 (LEVEL-3)	203	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-0" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
301.1	STAIR-1 (LEVEL-4)	301	D-1	H.M.	0	3'-0" (V.I.F.)	7'-4" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN
302.1	STORAGE	302	D-1	H.M.	0	3'-0" (V.I.F.)	7'-4" (V.I.F.)	H.M.	1	E.T.R.	NEW DOOR & FRAME
303.1	STAIR-2 (LEVEL-4)	303	D-2	H.M.	0	3'-0" (V.I.F.)	7'-4" (V.I.F.)	H.M.	1	E.T.R.	NEW DOOR & FRAME
304.1	VESTIBULE (LEVEL-4)	304	N.A.	N.A.	0	3'-0" (V.I.F.)	7'-4" (V.I.F.)	H.M.	N.A.	E.T.R.	EXISTING TO REMAIN

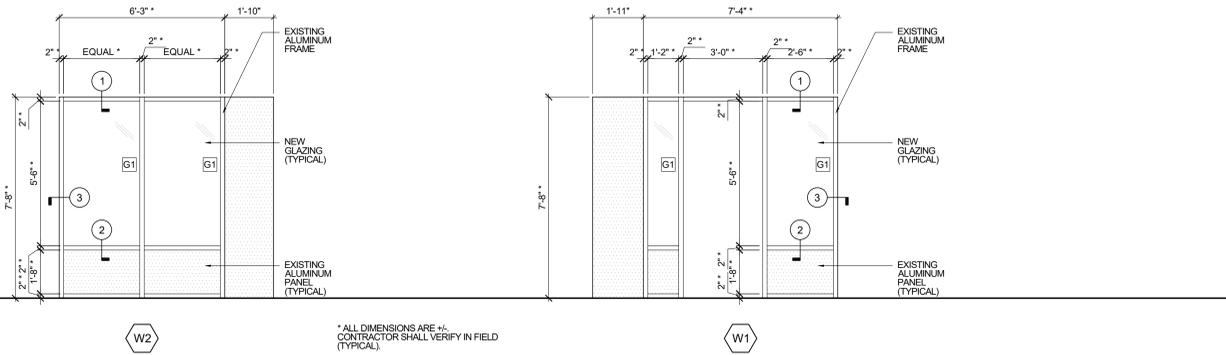
DOOR NUMBER	ROOM NAME	ROOM NUMBER	FRAME ELEV	FRAME WIDTH	FRAME HEIGHT	REMARKS
G01.2	STAIR-1 (LEVEL-1)	G01	--	4" (V.I.F.)	V.I.F.	EXISTING TO REMAIN
G04.2	STAIR-2 (LEVEL-1.5)	G01	--	4" (V.I.F.)	V.I.F.	EXISTING TO REMAIN
G04.3	STAIR-2 (LEVEL-1.5)	G01	--	4" (V.I.F.)	V.I.F.	EXISTING TO REMAIN
304.1	VESTIBULE (LEVEL-4)	304	W1	4" (V.I.F.)	8'-10"	SUPPLY AND INSTALL NEW GLAZING WITHIN EXISTING FRAME.
NONE	VESTIBULE (LEVEL-4)	304	W2	4" (V.I.F.)	8'-10"	SUPPLY AND INSTALL NEW GLAZING WITHIN EXISTING FRAME.

General Notes For Doors and Frames

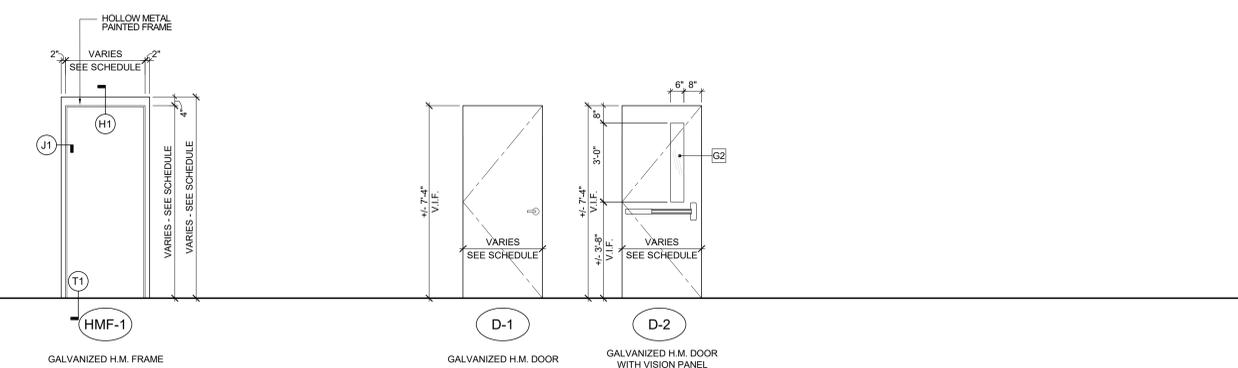
- REFER TO FLOOR PLANS FOR PROPER ORIENTATION AND HANDING OF ALL FRAME SYSTEMS AND DOORS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY EACH SCHEDULED DOOR.
- ALL ROUGH-IN DIMENSIONS ARE TO BE VERIFIED IN FIELD (V.I.F.) PRIOR TO FABRICATION. NOTIFY ARCHITECT IN WRITING IMMEDIATELY IF ANY DISCREPANCIES OCCUR.
- INSTALL DOORS IN PREPARED OPENINGS, PLUMB AND TRUE, WITH EVEN MARGINS AT HEAD AND JAMB, AND TO CLEAR THE FINISHED DOOR BY 1/4". DOORS & FRAMES SHALL BE PROTECTED FROM DAMAGE UNTIL TIME OF OCCUPANCY. ALL DOORS AND FRAMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- SUBMIT PRODUCT CUT SHEETS AND SAMPLES OF ALL SPECIFIED FINISHES FOR ALL DOOR AND FRAME TYPES DURING THE SUBMITTAL PROCESS FOR REVIEW AND APPROVAL BY ARCHITECT.
- REFER TO PROJECT SPECIFICATIONS FOR HARDWARE SCHEDULE, SETS AND ADDITIONAL INFORMATION.
- PROVIDE SAMPLES FOR VERIFICATION AS INDICATED; 12" X 12" FULL-SIZE WINDOW CORNER OF GLAZING UNITS AS SPECIFIED (1 PER GLAZING TYPE).
- REFER TO SPECIFICATION SECTION 067100 FOR HARDWARE SETS.

Door Schedule Abbreviations

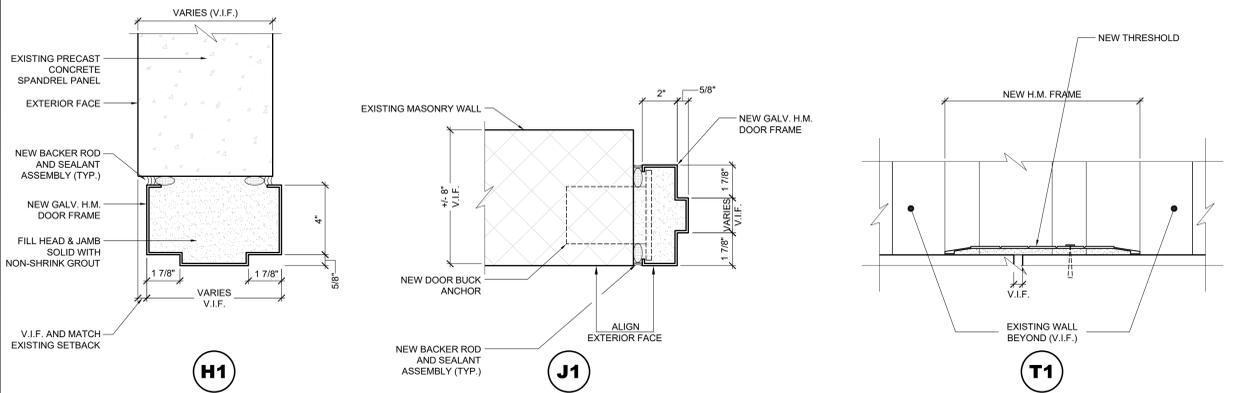
H.M. = HOLLOW METAL; AL/GL. = ALUMINUM / GLASS; E.T.R. = EXISTING TO REMAIN; V.I.F. = VERIFY IN FIELD



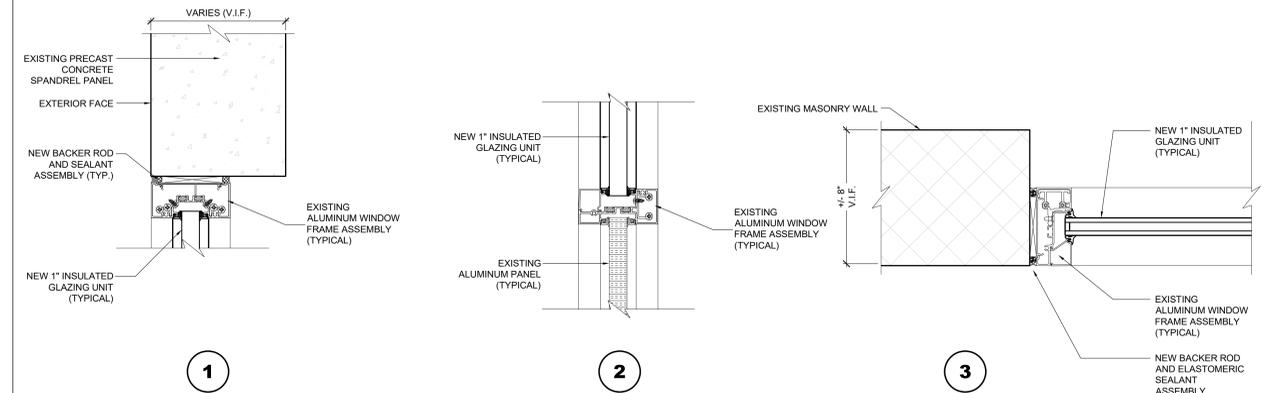
ALUMINUM FRAME TYPES



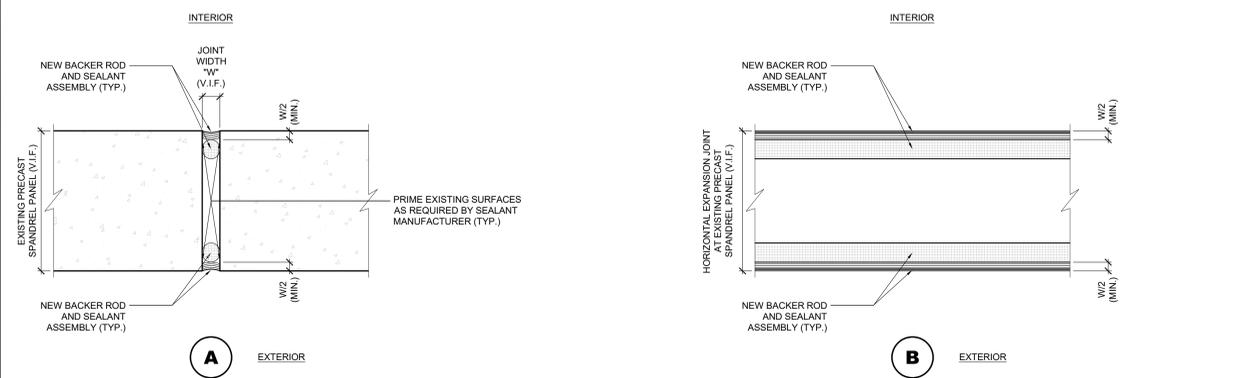
HOLLOW METAL DOOR AND FRAME TYPES



DOOR HEAD, JAMB, THRESHOLD DETAILS



WINDOW HEAD, JAMB, SILL DETAILS



TYPICAL SPANDREL PANEL EXPANSION JOINT REPAIR DETAILS

NOTE: COMPLETELY RAKE OUT AND REMOVE ANY EXISTING SEALANT REMNANTS AND RESIDUE PRIOR TO INSTALLING NEW SEALNT MATERIAL (TYPICAL AT ALL LOCATIONS).

0 1/07/2026 ISSUED FOR BIDDING
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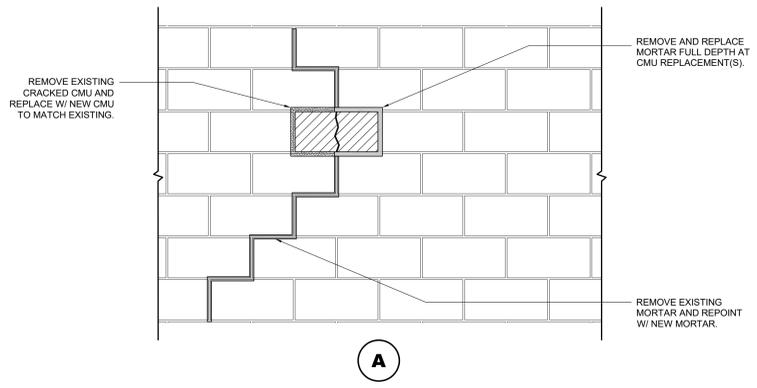
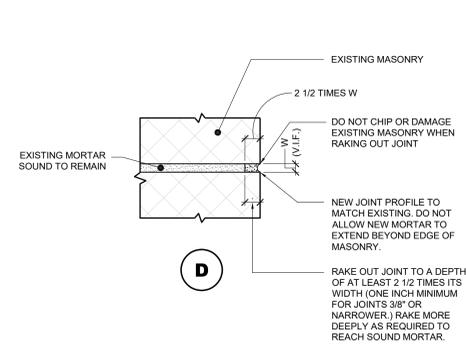
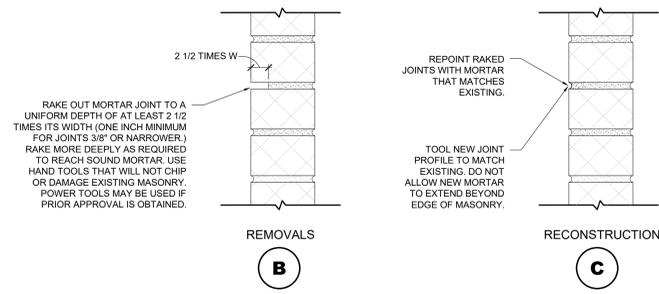
Client:
UNION COUNTY AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabethtown, NJ 07207

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
 Block 246 Lot 1
 200 West 2nd Street
 Plainfield, NJ 07063

Drawing Information:
 Project No: 25.022
 Date: 1/07/2026
 Drawn By: PC
 Checked By: VM

Sheet Name:
DOOR, FRAME AND WINDOW SCHEDULES

Sheet No:
A-010
 Sheet 6 of 59



TYPICAL CRACKED MASONRY REPAIR DETAILS

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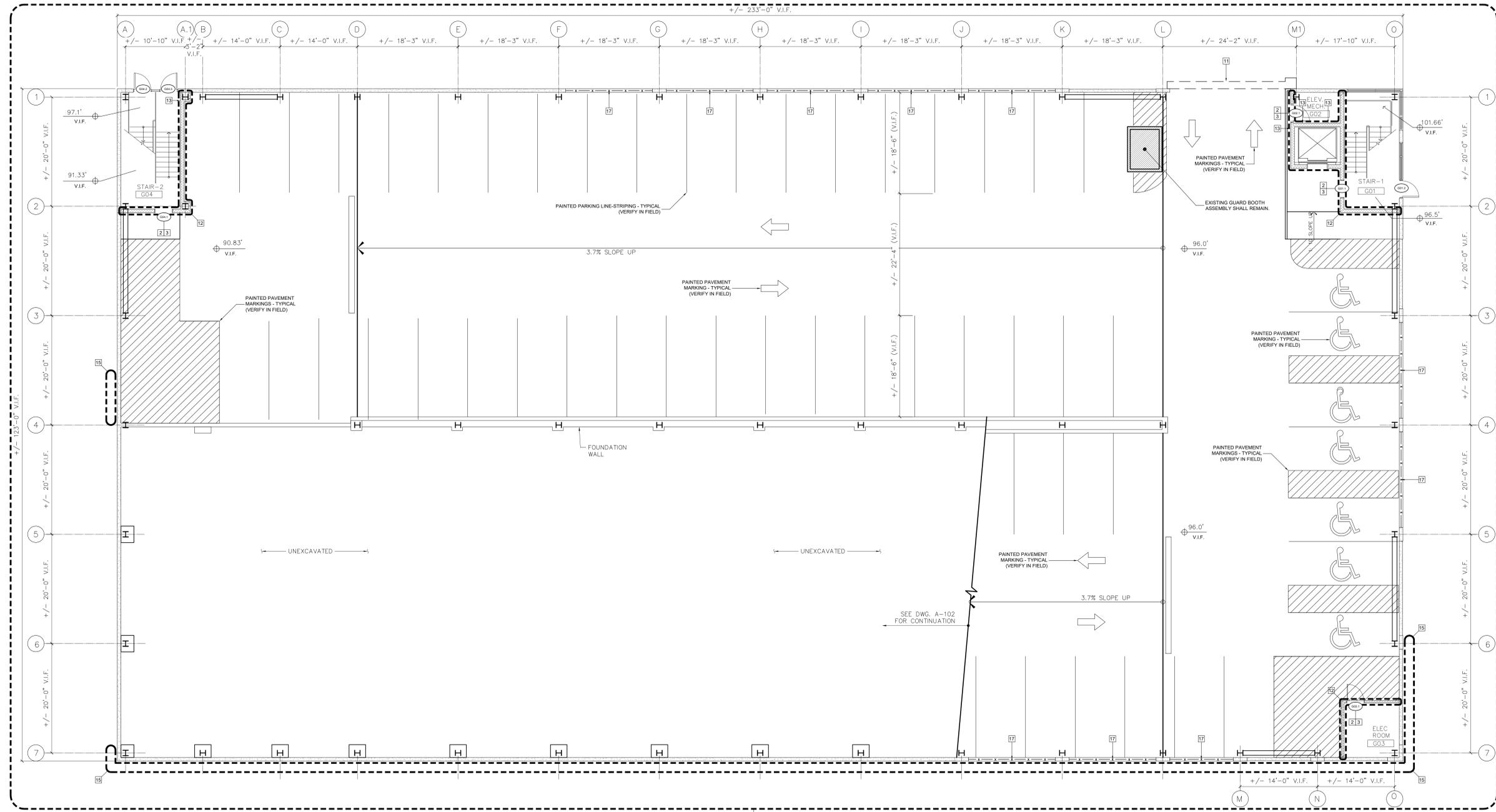
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Plainfield, NJ 07063

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Checked By: VM

Sheet Name:
MISC. TYPICAL DETAILS

Sheet No:
A-011
Sheet 7 of 59



NOTE: REFER ALSO TO MISCELLANEOUS TYPICAL DETAILS ON SHEET A-011.

SYMBOLS LEGEND:

[R] = KEY NOTE (REFER TO NUMBERED KEY NOTES ON SHEET A-200).

E.J. = EXPANSION JOINT.

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NJ RA A1 11415

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Plainfield, NJ 07063

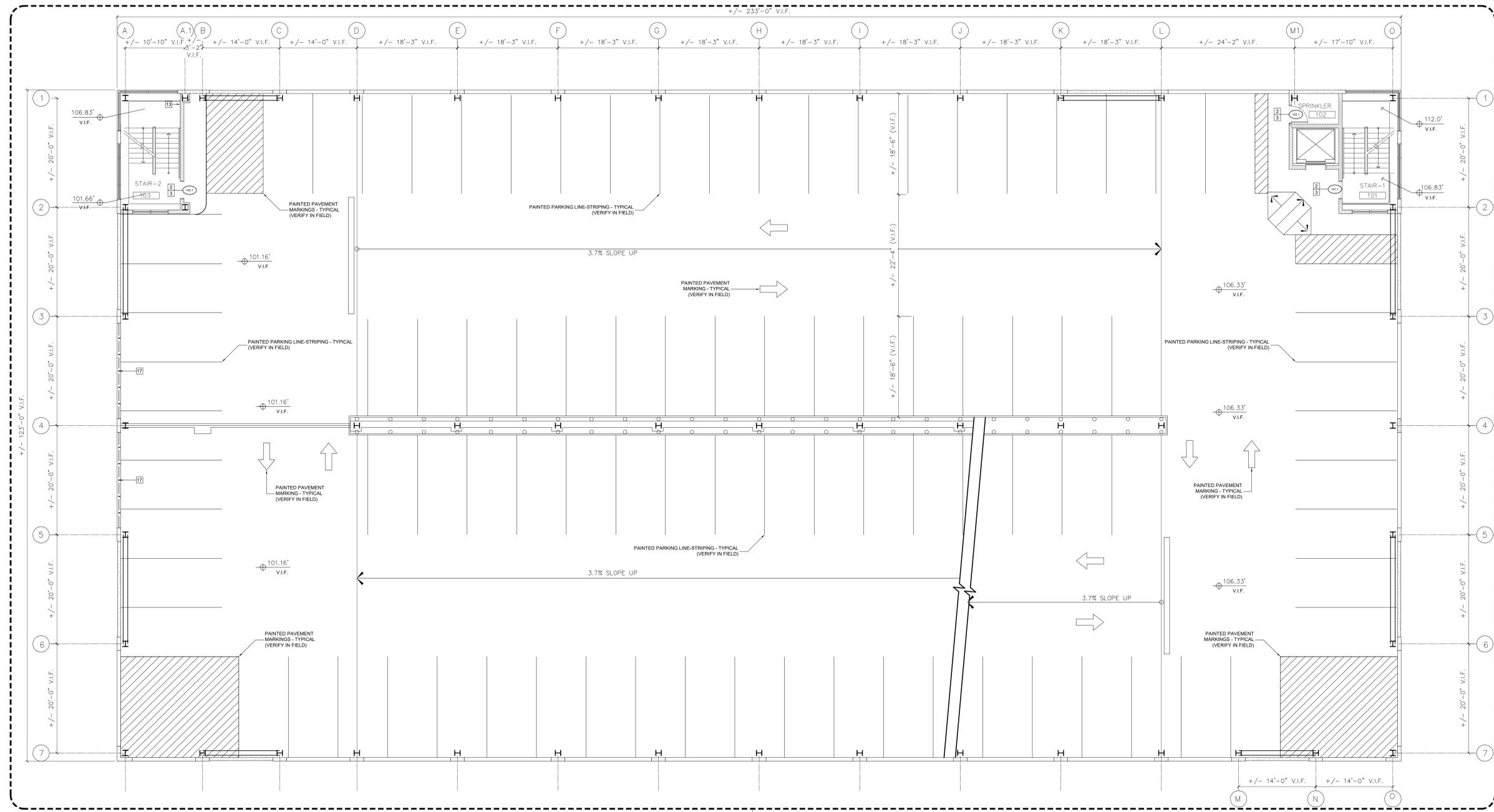
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Drawn By: PC
Checked By: VM

Sheet Name:
GROUND FLOOR PLAN

Sheet No:

A-101
Sheet 8 of 59

1 GROUND FLOOR PLAN
SCALE: 1/8" = 1'-0"



NOTE: REFER ALSO TO MISCELLANEOUS TYPICAL DETAILS ON SHEET A-011.

SYMBOLS LEGEND:
 [Key Note Symbol] = KEY NOTE (REFER TO NUMBERED KEY NOTES ON SHEET A-200).
 E.J. = EXPANSION JOINT.

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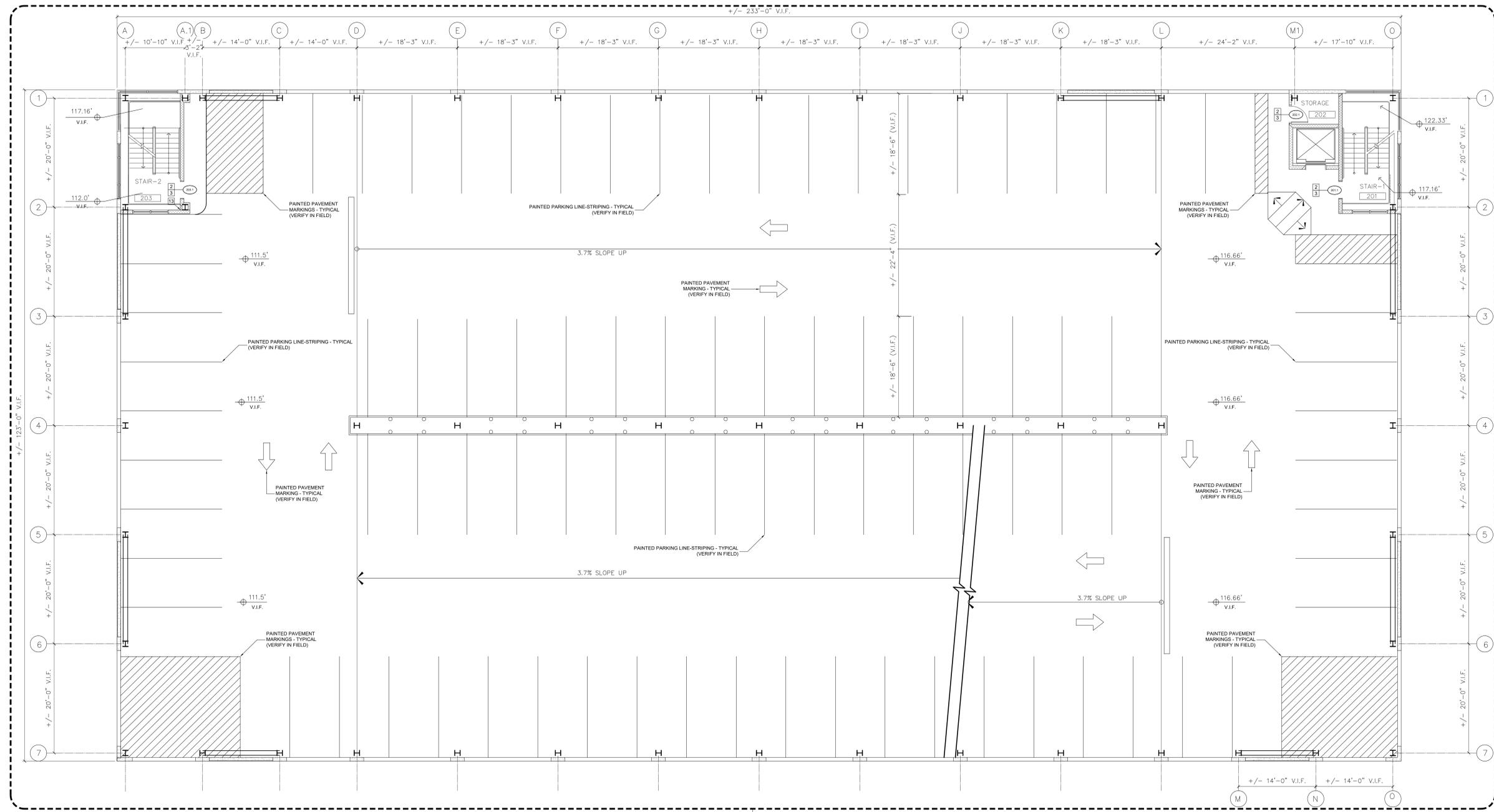
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 Project No: 25.022
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 Checked By: VM

Sheet Name:
SECOND FLOOR PLAN

Sheet No:

A-102
 Sheet 9 of 59

1 SECOND FLOOR PLAN
 SCALE: 1/8" = 1'-0"



NOTE: REFER ALSO TO MISCELLANEOUS TYPICAL DETAILS ON SHEET A-01.

SYMBOLS LEGEND:
 [Key Note Symbol] = KEY NOTE (REFER TO NUMBERED KEY NOTES ON SHEET A-200)
 E.J. = EXPANSION JOINT.

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 Project No: 25.022
 Date: 1/07/2026
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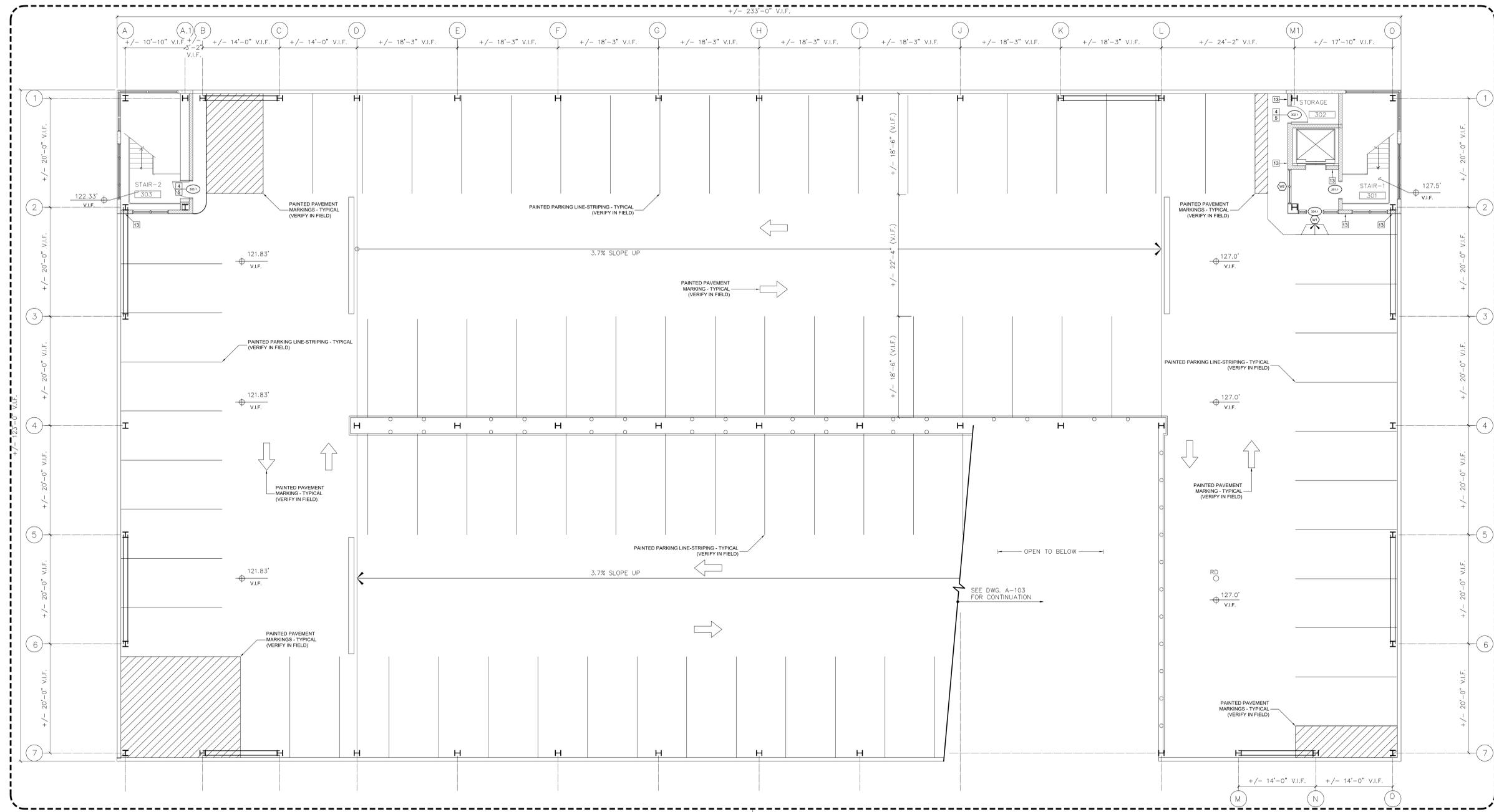
Sheet Name:
THIRD FLOOR PLAN

Sheet No:

A-103

Sheet 10 of 59

1 THIRD FLOOR PLAN
 SCALE: 1/8" = 1'-0"



SYMBOLS LEGEND:
 [Symbol] = KEY NOTE (REFER TO NUMBERED KEY NOTES ON SHEET A-200).
 E.J. = EXPANSION JOINT.

No.	Date	Description
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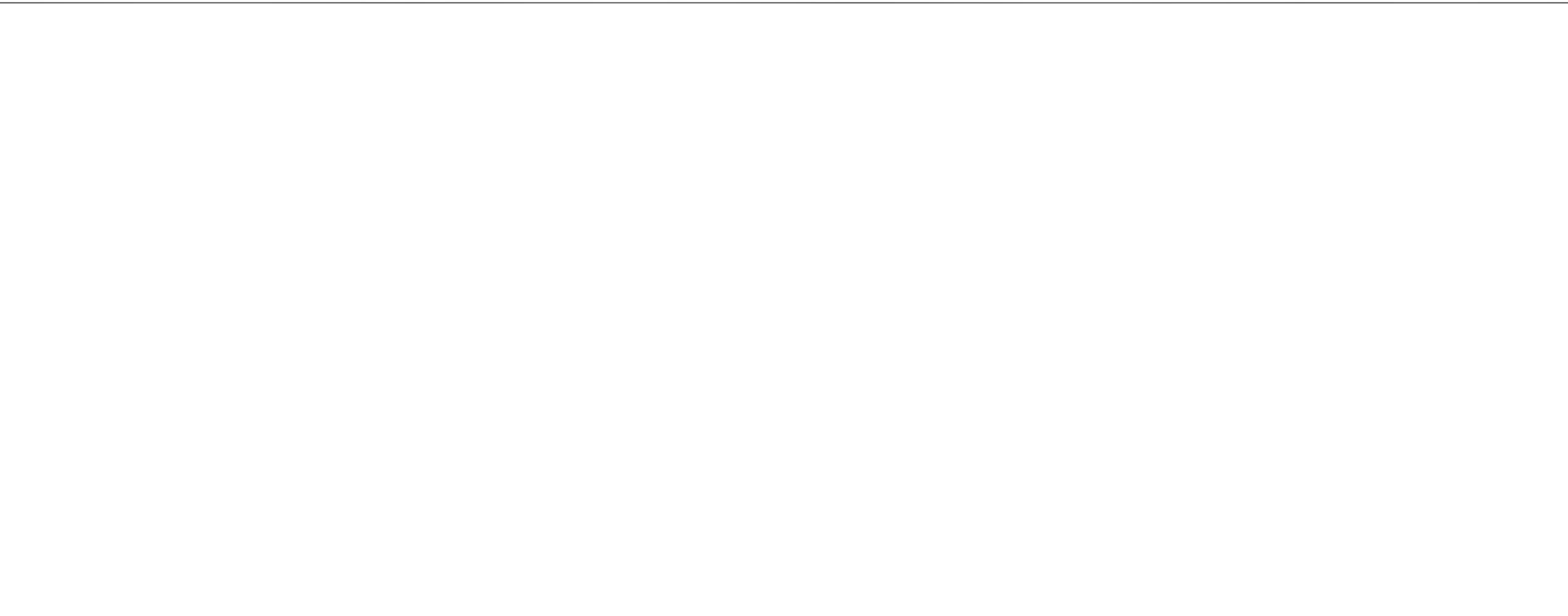
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 Project No: 25.022
 Date: 1/07/2026
 Drawn By: PC
 Checked By: VM

Sheet Name:
FOURTH FLOOR PLAN

Sheet No:
A-104
 Sheet 11 of 59



ELEVATION KEY NOTES:

- 51 NOT USED.
- 52 NOT USED.
- 53 NOT USED.
- 54 CAREFULLY REMOVE EXISTING H.M. DOOR AND FRAME ASSEMBLY.
- 55 SUPPLY AND INSTALL NEW GALVANIZED H.M. DOOR AND FRAME ASSEMBLY INCLUSIVE OF ALL NEW DOOR-HARDWARE.
- 56 REMOVE EXISTING CAULK AND BACKER ROD ASSEMBLY FROM ENTIRETY OF EXISTING EXPANSION JOINT AS PER TYPICAL DETAILS ON SHEET A-010 (TYPICAL AT ALL INTERIOR & EXTERIOR VERTICAL & HORIZONTAL E.J.'S AT PRECAST SPANDREL PANELS).
- 57 INSTALL NEW BACKER ROD AND ELASTOMERIC SEALANT ASSEMBLY INTO ENTIRETY OF EXISTING EXPANSION JOINT AS PER TYPICAL DETAILS ON SHEET A-010 (TYPICAL AT ALL INTERIOR & EXTERIOR VERTICAL & HORIZONTAL E.J.'S AT PRECAST SPANDREL PANELS).
- 58 PREPARE MOCK-UP OF EACH TYPICAL EXPANSION JOINT SEALANT ASSEMBLY FOR ARCHITECT'S APPROVAL PRIOR TO PROCEEDING.
- 59 CLEAN ENTIRE INTERIOR AND EXTERIOR FACE OF EXISTING PRECAST FACADE AT ALL LEVELS WITH CLEANER SPECIFIED PER KEY-NOTE #71, IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.
- 60 TEMPORARILY REMOVE EXISTING FACADE-MOUNTED SIGNAGE TO FACILITATE OTHER WORK, AND THEN RE-INSTALL EXISTING SIGNAGE.
- 61 REMOVE ENTIRE EXISTING METAL HOOD ASSEMBLY FROM EXISTING POWERED ROLL-UP GRILLE; SUPPLY AND INSTALL, NEW GALVANIZED AND FACTORY-FINISHED METAL HOOD ASSEMBLY.
- 62 CLEAN & PREPARE EXISTING MASONRY WALLS TO RECEIVE NEW PAINTED FINISH. APPLY THREE (3) COATS (PRIME COAT, 1ST FINISH COAT, & 2ND FINISH COAT) OF NEW PAINT ON MASONRY WALLS.
- 63 REPAIR APPROXIMATELY TEN (10) LINEAR FOOT CRACK IN EXISTING MASONRY PARTITION WALL AS PER TYPICAL DETAILS ON SHEET A-011.
- 64 SEAL INTERNAL SEAMS BETWEEN ADJOINING SECTIONS OF RAINWATER GUTTERS AND BETWEEN RAINWATER LEADERS AND GUTTERS WITH SELF-ADHERED FLEXIBLE BUTYL TAPE INSTALLED IN ACCORDANCE WITH THE BUTYL TAPE MANUFACTURER'S RECOMMENDATIONS. TEST ALL GUTTERS AND LEADERS TO CONFIRM NO LEAKS.
- 65 EXISTING EXTERIOR WALL-MOUNTED LIGHT FIXTURE - REMOVE AND REPLACE WITH NEW; REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 66 CAREFULLY REMOVE EXISTING INSULATED GLAZING UNITS FROM EXISTING ALUMINUM FRAMED WINDOW ASSEMBLY. SUPPLY NEW INSULATED GLAZING UNITS; INSTALL WITHIN EXISTING FRAMES.
- 67 EXISTING ALUMINUM FRAMED WINDOW / DOOR ASSEMBLY SHALL REMAIN; CAREFULLY REMOVE EXISTING & REINSTALL NEW SEALANT & BACKER ROD ASSEMBLIES AT ENTIRE PERIMETER OF FRAME AT EXTERIOR AND INTERIOR. CLEAN ALL EXTERIOR AND INTERIOR SURFACES.
- 68 EXISTING WALL-MOUNTED METAL FENCING ASSEMBLY SHALL REMAIN; CAREFULLY REMOVE AND REINSTALL AS REQUIRED TO FACILITATE OTHER WORK (TYPICAL).

- 69 OPEN TO INTERIOR.
- 70 ALL EXISTING SPANDREL PANEL EXPANSION JOINT ASSEMBLIES WHETHER SHOWN ON NOT SHOWN, SHALL BE REPLACED IN ACCORDANCE WITH KEY NOTES #56 & #57.
- 71 CLEANER FOR PRECAST CONCRETE SPANDREL PANELS: "ARTISAN NO PANE RESTORATION CLEANER" (BASIS OF DESIGN), AS MANUFACTURED BY CHEMIQUIE, INC., MOORESTOWN, NJ. OR ACCEPTABLE EQUIVALENT MEETING THE FOLLOWING CRITERIA: A. WILL NOT ETCH GLASS OR METAL. B. DISCHARGE DURING CLEANING HAS A PH HIGHER THAN 5.5 AND LOWER THAN 12. I. THIS MAY REQUIRE ADDITIONAL DILUTION OF THE CLEANING PRODUCT. C. IT'S DESIGNED FOR CLEANING OF PRECAST CONCRETE SPANDREL PANEL FACADES.

PLAN KEY NOTES:

- 1 NOT USED.
- 2 REMOVE ALL RUST AND SCALE FROM EXISTING H.M. DOOR & FRAME; CLEAN AND PREPARE EXISTING H.M. DOOR & FRAME TO RECEIVE NEW PAINTED FINISH.
- 3 APPLY THREE (3) COATS (PRIME COAT, FIRST FINISH COAT, AND SECOND FINISH COAT) OF NEW PAINT ON H.M. DOOR & FRAME.
- 4 CAREFULLY REMOVE EXISTING H.M. DOOR AND FRAME ASSEMBLY.
- 5 SUPPLY AND INSTALL NEW GALVANIZED H.M. DOOR AND FRAME ASSEMBLY INCLUSIVE OF ALL NEW DOOR-HARDWARE. APPLY THREE (3) COATS OF PAINT ON NEW H.M. DOOR & FRAME.
- 6 REMOVE EXISTING CAULK AND BACKER ROD ASSEMBLY FROM ENTIRETY OF EXISTING EXPANSION JOINT AS PER TYPICAL DETAILS ON SHEET A-010 (TYPICAL AT ALL INTERIOR & EXTERIOR VERTICAL & HORIZONTAL E.J.'S AT PRECAST SPANDREL PANELS).
- 7 INSTALL NEW BACKER ROD AND ELASTOMERIC SEALANT ASSEMBLY INTO ENTIRETY OF EXISTING EXPANSION JOINT AS PER TYPICAL DETAILS ON SHEET A-010 (TYPICAL AT ALL INTERIOR & EXTERIOR VERTICAL & HORIZONTAL E.J.'S AT PRECAST SPANDREL PANELS).
- 8 PREPARE MOCK-UP OF EACH TYPICAL EXPANSION JOINT SEALANT ASSEMBLY FOR ARCHITECT'S APPROVAL PRIOR TO PROCEEDING.
- 9 CLEAN ENTIRE INTERIOR AND EXTERIOR FACE OF EXISTING PRECAST FACADE AT ALL LEVELS WITH CLEANER SPECIFIED PER KEY-NOTE #19, IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.
- 10 FIELD-VERIFY & DOCUMENT ALL EXISTING PARKING LINE-STRIPING & PAVEMENT MARKINGS. CLEAN & PREPARE CONCRETE FLOORS / DECK, & CURBS TO RECEIVE NEW LINE-STRIPING & MARKINGS.
- 11 REMOVE ENTIRE EXISTING METAL HOOD ASSEMBLY FROM EXISTING POWERED ROLL-UP GRILLE; SUPPLY AND INSTALL, GALVANIZED AND NEW FACTORY-FINISHED METAL HOOD ASSEMBLY.
- 12 CLEAN & PREPARE EXISTING MASONRY WALLS TO RECEIVE NEW PAINTED FINISH. APPLY THREE (3) COATS (PRIME COAT, 1ST FINISH COAT, & 2ND FINISH COAT) OF NEW PAINT ON MASONRY WALLS.
- 13 REPAIR APPROXIMATELY TEN (10) LINEAR FOOT CRACK IN EXISTING MASONRY PARTITION WALL AS PER TYPICAL DETAILS ON SHEET A-011.
- 14 NOT USED.
- 15 CAREFULLY PRUNE EXISTING TREES AND WOODY SHRUBS (DURING TREE / SHRUB DORMANT PERIOD) AWAY FROM EXISTING FACADE TO PROVIDE 2'-0" (MINIMUM) CLEARANCE FROM FACADE.
- 16 APPLY NEW PAINTED PARKING LINE-STRIPING & PAINTED PAVEMENT MARKINGS TO MATCH ALL EXISTING PAINTED LINE-STRIPING AND MARKINGS ON CONCRETE FLOORS / DECK, & CURBS.
- 17 EXISTING WALL-MOUNTED METAL FENCING ASSEMBLY SHALL REMAIN; CAREFULLY REMOVE AND REINSTALL AS REQUIRED TO FACILITATE OTHER WORK (TYPICAL).
- 18 NOT USED.

- 19 CLEANER FOR PRECAST CONCRETE SPANDREL PANELS: "ARTISAN NO PANE RESTORATION CLEANER" (BASIS OF DESIGN), AS MANUFACTURED BY CHEMIQUIE, INC., MOORESTOWN, NJ. OR ACCEPTABLE EQUIVALENT MEETING THE FOLLOWING CRITERIA: A. WILL NOT ETCH GLASS OR METAL. B. DISCHARGE DURING CLEANING HAS A PH HIGHER THAN 5.5 AND LOWER THAN 12. I. THIS MAY REQUIRE ADDITIONAL DILUTION OF THE CLEANING PRODUCT. C. IT'S DESIGNED FOR CLEANING OF PRECAST CONCRETE SPANDREL PANEL FACADES.

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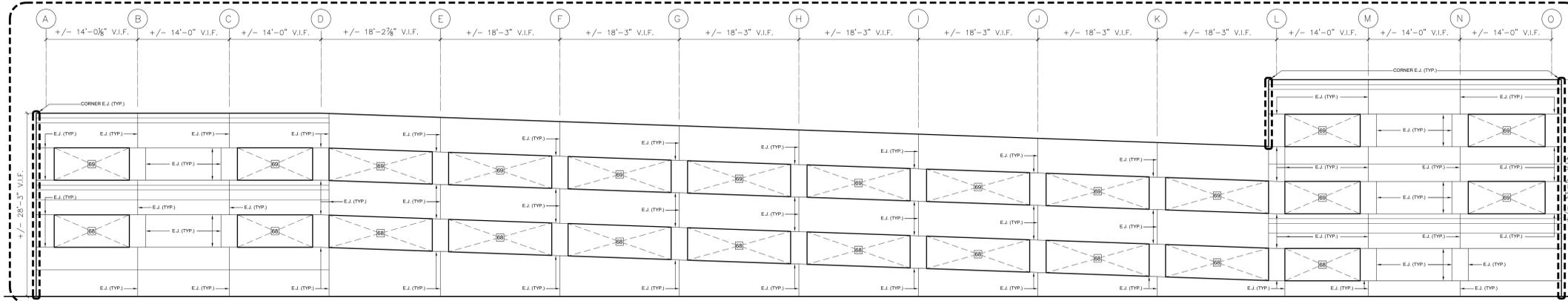
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Client:
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 Elizabethtown, NJ 07207
 Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
 Block 246 | Lot 1
 200 West 2nd Street
 Plainfield, NJ 07063
 Drawing Information:
 Project No: 25.022
 Date: 1/07/2026
 Drawn By: PC
 Checked By: VM
 Sheet Name:

KEY NOTES

Sheet No:

A-200
Sheet 12 of 59

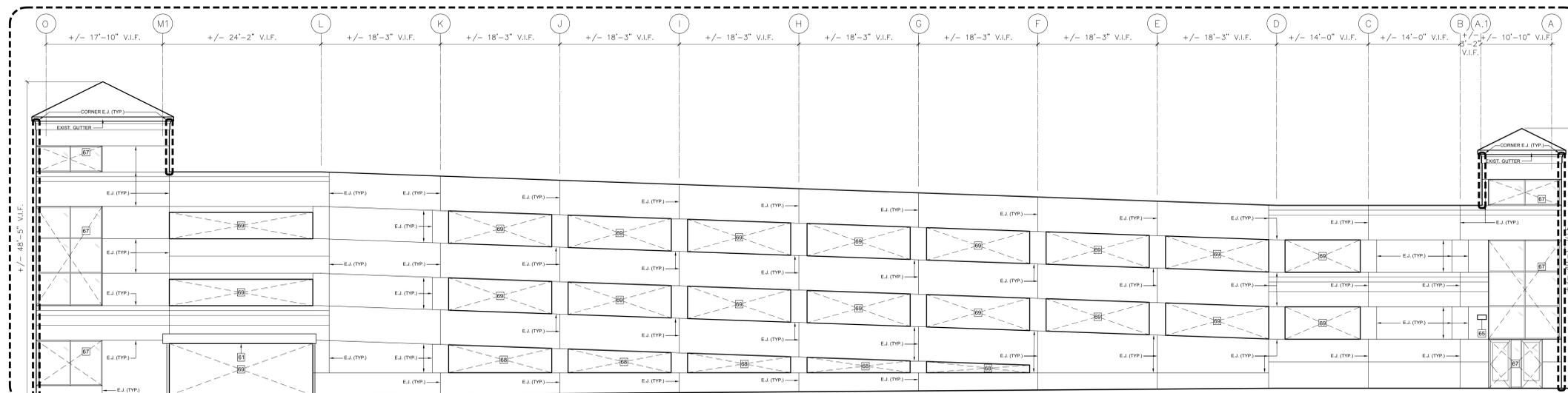


56575859607071

NOTE: REFER TO TYPICAL SPANDREL PANEL EXPANSION JOINT SECTION DETAILS ON SHEET A-010.

1 EXTERIOR SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

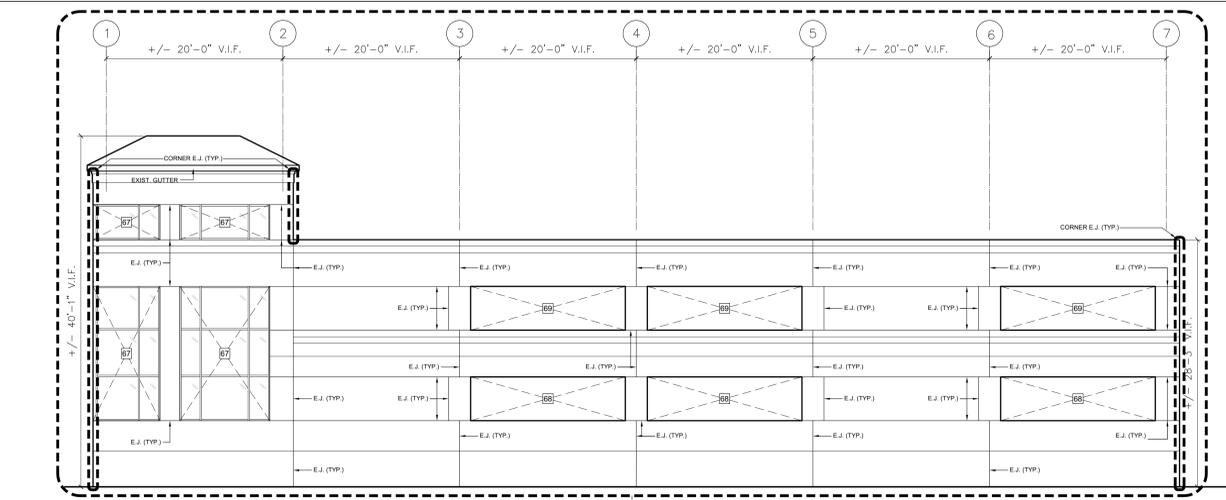


56575859607071

NOTE: REFER TO TYPICAL SPANDREL PANEL EXPANSION JOINT SECTION DETAILS ON SHEET A-010.

2 EXTERIOR NORTH ELEVATION

SCALE: 1/8" = 1'-0"

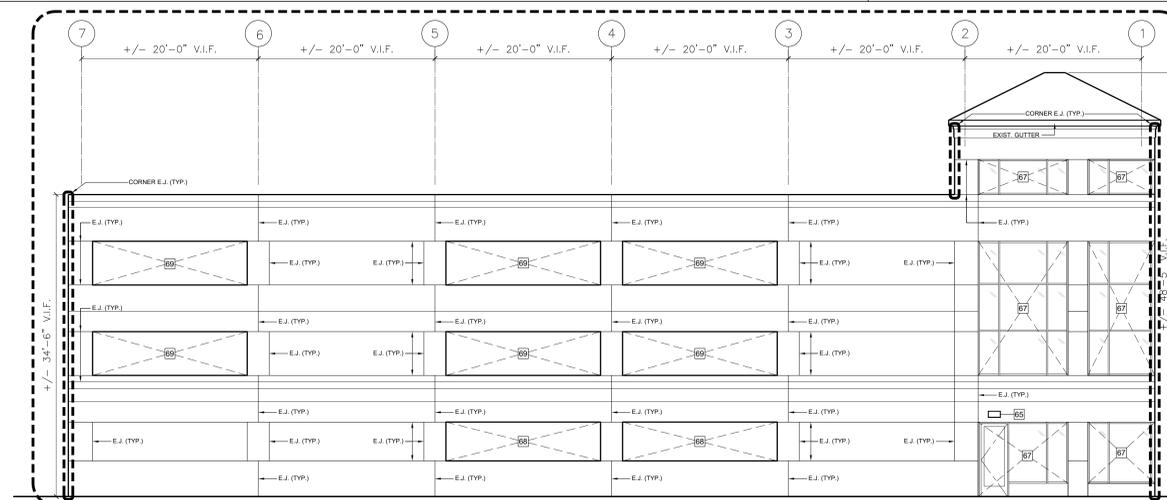


56575859607071

NOTE: REFER TO TYPICAL SPANDREL PANEL EXPANSION JOINT SECTION DETAILS ON SHEET A-010.

3 EXTERIOR WEST ELEVATION

SCALE: 1/8" = 1'-0"

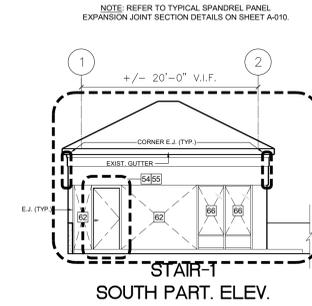


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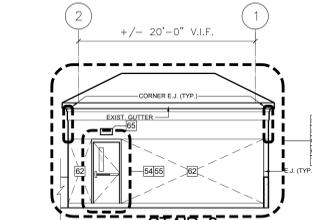
NOTE: REFER TO TYPICAL SPANDREL PANEL EXPANSION JOINT SECTION DETAILS ON SHEET A-010.

4 EXTERIOR EAST ELEVATION

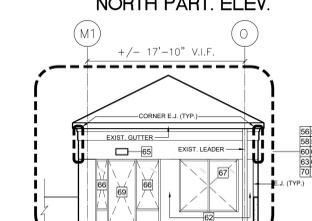
SCALE: 1/8" = 1'-0"



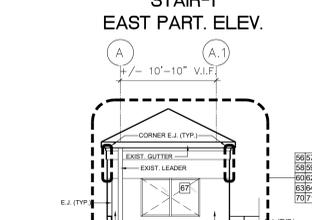
STAIR-1 SOUTH PART. ELEV.



STAIR-2 NORTH PART. ELEV.



STAIR-1 EAST PART. ELEV.



STAIR-2 EAST PART. ELEV.

5 UPPER LEVEL ELEVATIONS

SCALE: 1/8" = 1'-0"

SYMBOLS LEGEND:
[Symbol] = KEY NOTE (REFER TO NUMBERED KEY NOTES ON SHEET A-200).
E.J. = EXPANSION JOINT.

No.	Date	Description
0	1/07/2026	ISSUED FOR BIDDING
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Vincent A. Myers, AIA
NJ RA A114145

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10 Elizabethtown Plaza - 5th Floor
Elizabethtown, NJ 07063

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Block 246 (Lot 1)
200 West 2nd Street
Plainfield, NJ 07063

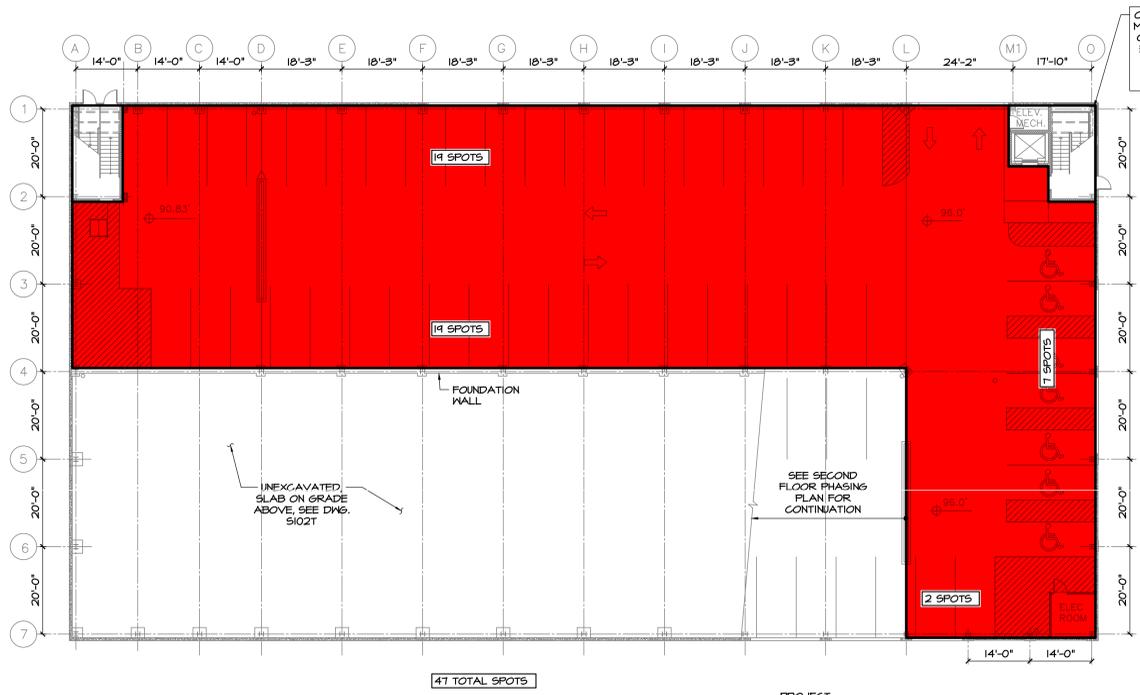
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Date: 1/07/2026
Drawn By: PC
Checked By: VM

Sheet Name:
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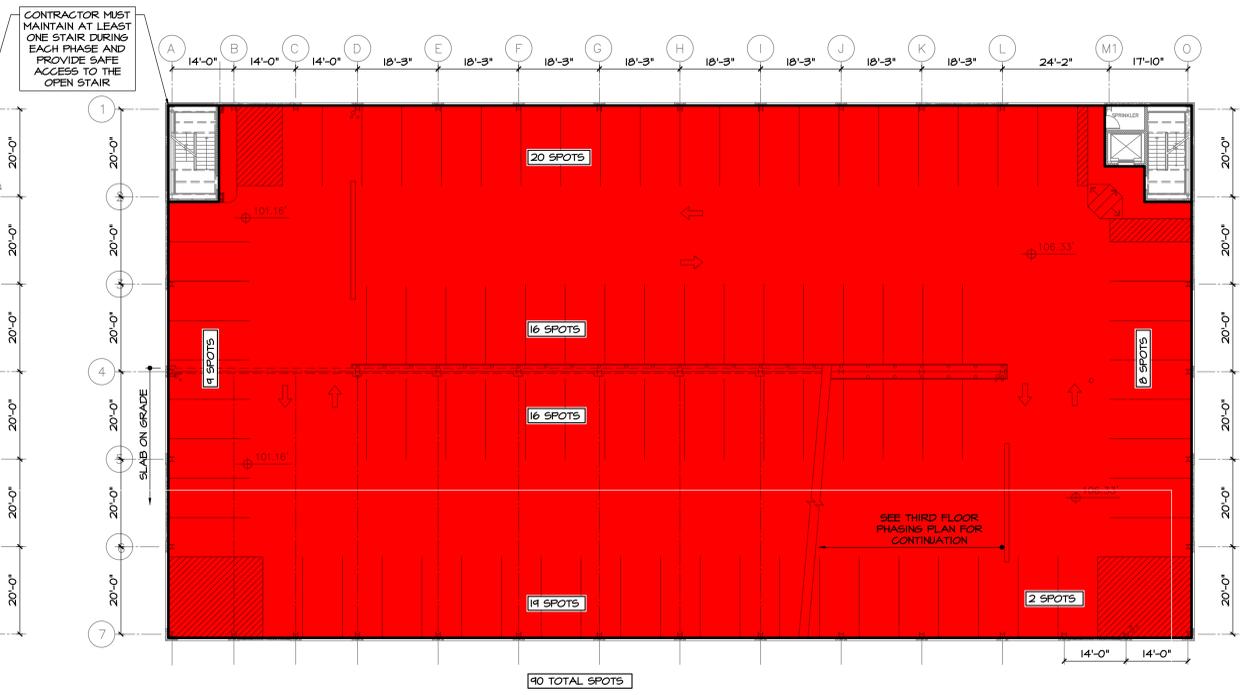
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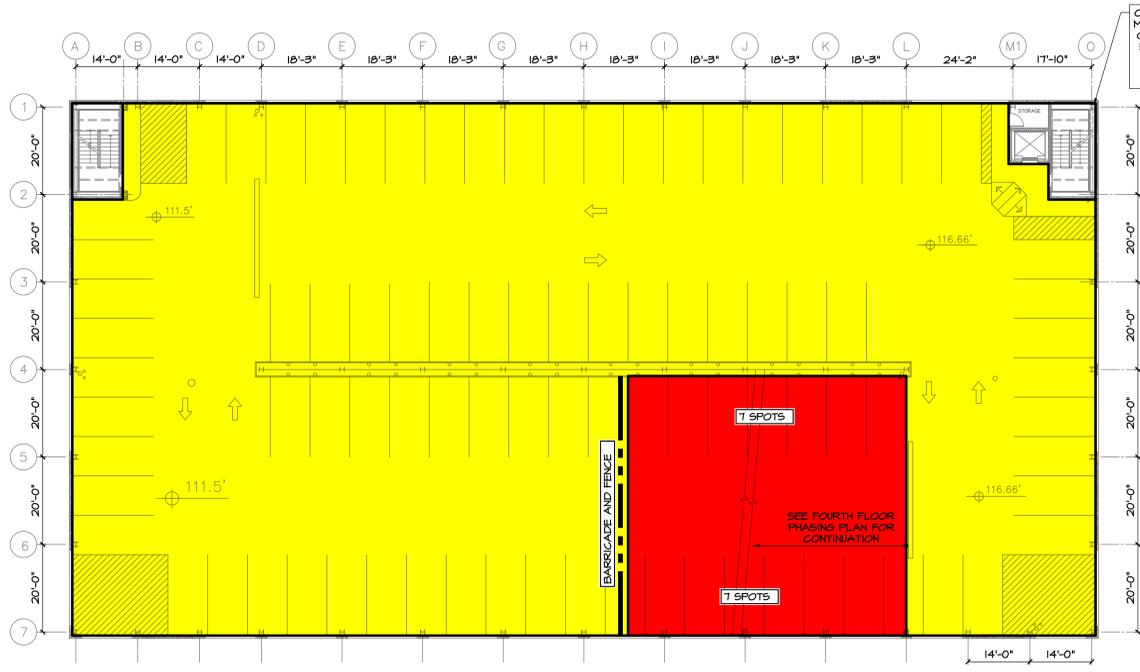
Sheet 13 of 59



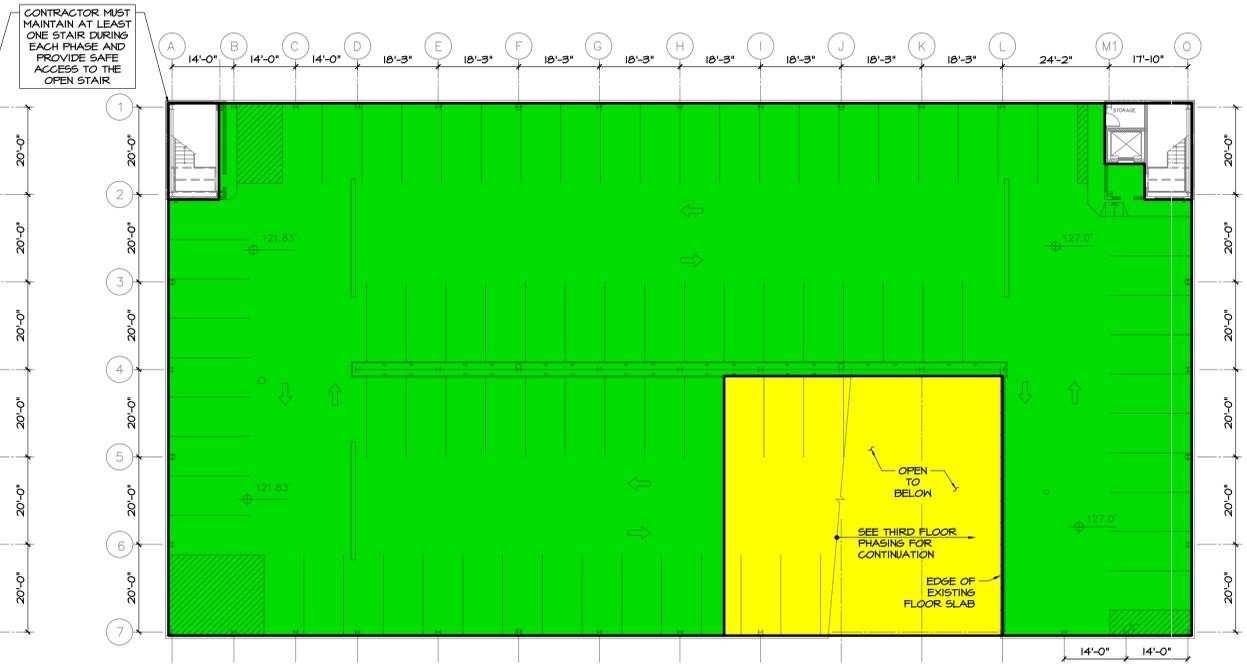
GROUND FLOOR SLAB ON GRADE PHASING PLAN
SCALE: 1/16" = 1'-0"



SECOND FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



THIRD FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



FOURTH FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"

PHASE 1
150 PARKING STALLS MAINTAINED

- PROJECT REQUIREMENTS**
- REFER TO FRONT END SPECIFICATIONS PROVIDED BY OWNER FOR A COMPLETE LIST OF COORDINATION, PHASING AND PRE-QUALIFICATION REQUIREMENTS.
 - REFER TO OWNER FOR RULES AND REGULATIONS, TO BE ENFORCED BY OWNER.
 - COORDINATION
 - COORDINATE WITH THE OWNER FOR REQUIREMENTS OF CONSTRUCTION AND REPAIR OPERATIONS. PERFORM CONSTRUCTION OPERATIONS WITHIN THE APPROVED WORK HOURS AND SCHEDULE AS AGREED UPON WITH THE OWNER.
 - COORDINATE CONSTRUCTION ACCESS, MATERIAL STORAGE, ACCESS TO UTILITIES, ETC. AS REQUIRED FOR CONSTRUCTION WITH THE OWNER.
 - COORDINATE CONSTRUCTION OPERATIONS WITH THE OWNER. COORDINATE ANY RESTRICTIONS IN ACCESS OR USE TO AREAS IMPACTED BY THE CONSTRUCTION OPERATIONS. CONTRACTOR TO COORDINATE AREAS TO BE CLOSED, OR RESTRICTED IN USE, DURING CONSTRUCTION OPERATIONS.
 - COORDINATE WITH THE OWNER ANY TEMPORARY SHUT OFF OR INTERRUPTION IN UTILITIES OR SERVICES OF THE MEP SYSTEMS REQUIRED. PROVIDE TEMPORARY MEASURES, OR OTHER ALTERNATE ARRANGEMENTS, AS REQUIRED TO MAINTAIN SERVICES, OR PROVIDE TEMPORARY SERVICES AS REQUIRED.
 - PHASING
 - THE PROVIDED PHASES IS A SUGGESTED PHASING PLAN ONLY. THE CONTRACTOR TO SUBMIT FINAL PHASING OF ALL WORK AS REQUIRED TO MINIMIZE INTERRUPTION OF THE USE OF THE ENTRANCE/EXIT RAMP AND ALL PARKING LEVELS AND MAINTAIN APPROXIMATELY 150 PARKING SPACES AS SHOWN IN THE SUGGESTED PLANS.
 - PROVIDE TEMPORARY LIGHTING AND EXIT SIGNS FOR PEDESTRIANS AND MOTORISTS IN AREAS THAT ARE TO REMAIN OPEN AND ACCESSIBLE TO THE PUBLIC.
 - SUBMIT PHASING PLANS THAT SHOW PARKING SPACES AND DRIVING AISLES THAT ARE PROPOSED TO BE TEMPORARILY BLOCKED OFF FOR REPAIRS AND CORRESPONDING TEMPORARY TRAFFIC CONTROL MEASURES.
 - PHASING PLANS FOR REPAIR WORK REQUIRED AT THE ENTRANCE/EXIT RAMP SHALL INDICATE METHOD AND EQUIPMENT REQUIRED TO MAINTAIN 2-WAY TRAFFIC VIA ALTERNATING 1-WAY LANE, AND TEMPORARY REMOVAL AND REPLACEMENT OF EXISTING CONCRETE CURB, AS REQUIRED TO MAINTAIN 24 HOURS A DAY OPERATION OF THE PARKING FACILITY.

- CONTRACTOR PRE-QUALIFICATIONS
 - CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SPECIFIC PROJECT EXPERIENCE WITH MIXING, PLACING, FINISHING AND CURING LATEX-MODIFIED GROUT CONCRETE AS DESCRIBED IN THE CONCRETE REPAIR GENERAL NOTES OVER THE PAST 5-YEARS.
 - CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SPECIFIC PROJECT EXPERIENCE WITH INSTALLING AND TESTING THE SACRIFICIAL GALVANIC PROTECTION DEVICES AS SHOWN ON THE DRAWINGS OVER THE PAST 5-YEARS.
 - CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SPECIFIC PROJECT EXPERIENCE WITH REPAIRING OR STRENGTHENING A PARKING GARAGE CONSTRUCTED WITH A POST TENSIONED SLAB SYSTEM WITHIN THE PAST 5-YEARS.
 - CONTRACTOR SHALL PROVIDE NAMES OF THE KEY PERSONNEL THAT WILL BE INVOLVED WITH THE PROJECT THAT HAVE A MINIMUM OF 5 YEARS OF EXPERIENCE WITH SIMILAR PROJECTS.
- WORK AREA AND TIME RESTRICTIONS:
 - ALL EXTERIOR FACADE WORK OR ANY OTHER WORK THAT DOES NOT REQUIRE THE CONTRACTOR TO OCCUPY ANY PARKING SPACES OR OCCUPY EITHER STAIR CASE CAN OCCUR AT ANY TIME.
 - ANY WORK MAY OCCUR DURING WEEKENDS.
 - WEEKENDS ARE DEFINED AS STARTING AT FRIDAY AT 7 PM AND EXTENDING TILL MONDAY AT 5 AM.
 - WEEKEND/OVERTIME WORK IS NOT SUBJECT TO AREA RESTRICTIONS NOTED BELOW.
 - PROVIDE A SCHEDULE BASED ON THESE WORK RESTRICTIONS IN THE BID.
 - THE GC WILL BE RESPONSIBLE FOR PROVIDING SIGNAGE AND BARRICADES AS NEEDED SAFELY TO DIRECT VEHICLES AROUND WORK AREA.

- LEGEND**
- DENOTES AREAS OF THE GARAGE TO REMAIN OPEN AND ACCESSIBLE TO THE PUBLIC
 - DENOTES AREAS OF THE GARAGE TO REMAIN OPEN AND ACCESSIBLE TO THE PUBLIC AND ARE FULLY REPAIRED
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 - CONTRACTOR CAN PERFORM ALL WORK REQUIRED AS NOTED ON PLANS
 - PROVIDE A FLAGGER AS NEEDED TO DIRECT TRAFFIC AT PINCH POINT
 - DENOTES BARRICADE AND TEMPORARY FENCE

SEE NOTE 5/A IN THE GENERAL STRUCTURAL AND CONSTRUCTION NOTES ON 5001. GC IS STILL RESPONSIBLE FOR JOB SITE CONDITIONS AND SAFELY EXECUTING THE WORK REGARDLESS, INCLUDING TEMPORARY PROTECTIONS

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Pennoni ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

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NJ PE GE55129

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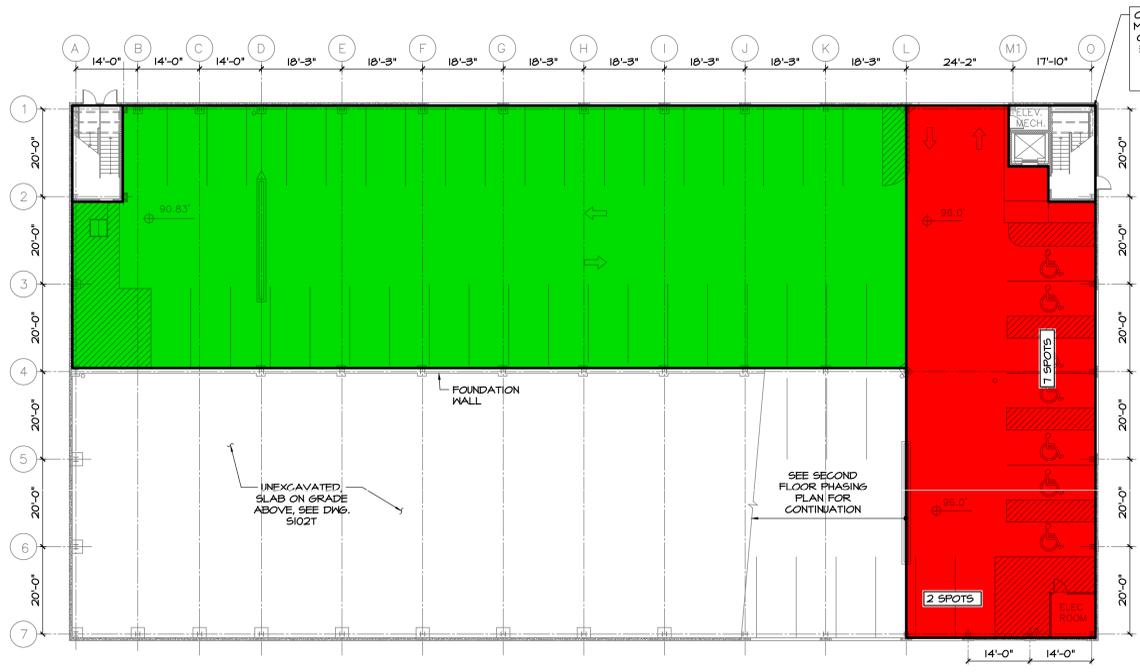
Client:
UNION COUNTY IMPROVEMENT AUTHORITY
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Elizabethtown, NJ 07207

Project:
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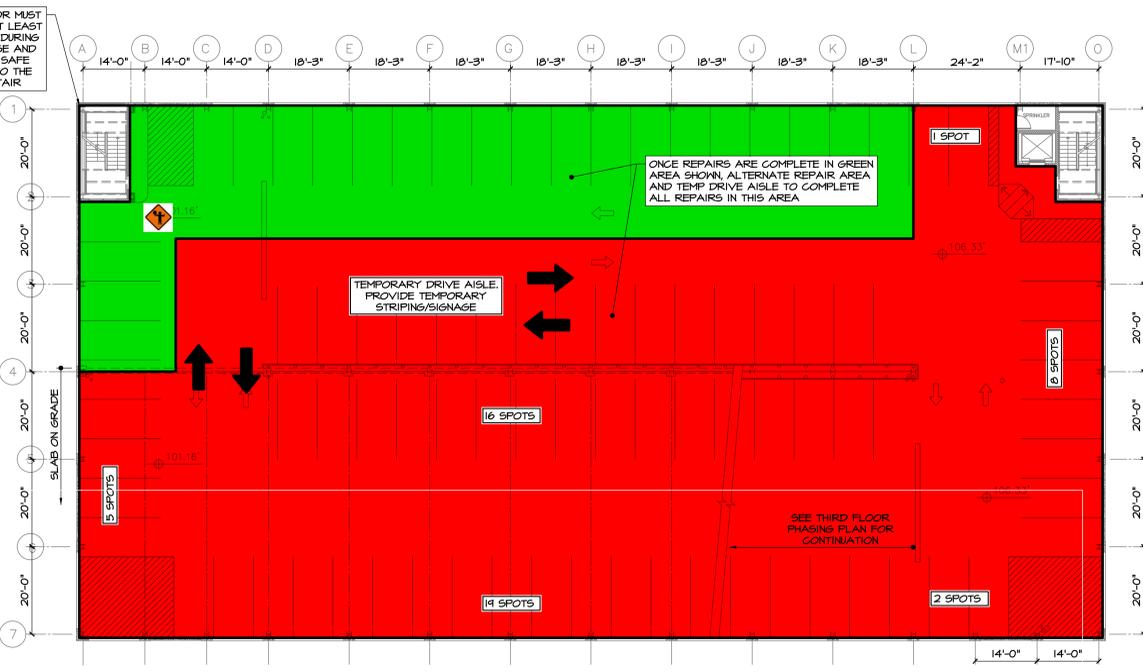
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Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
PHASE ONE PHASING PLANS

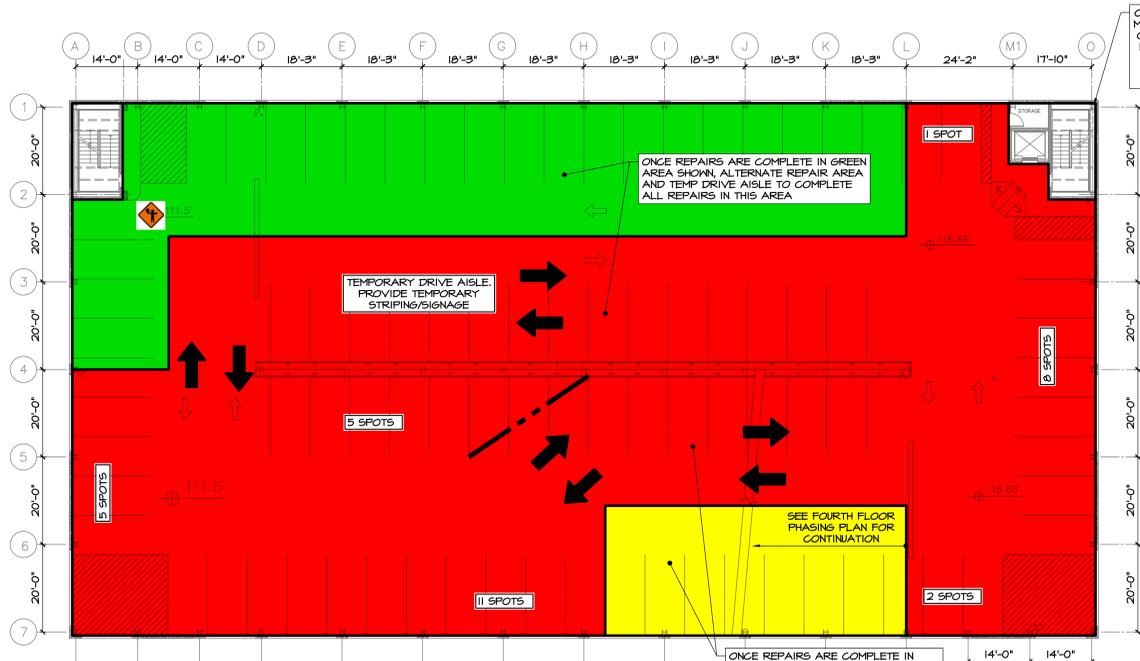
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PH001
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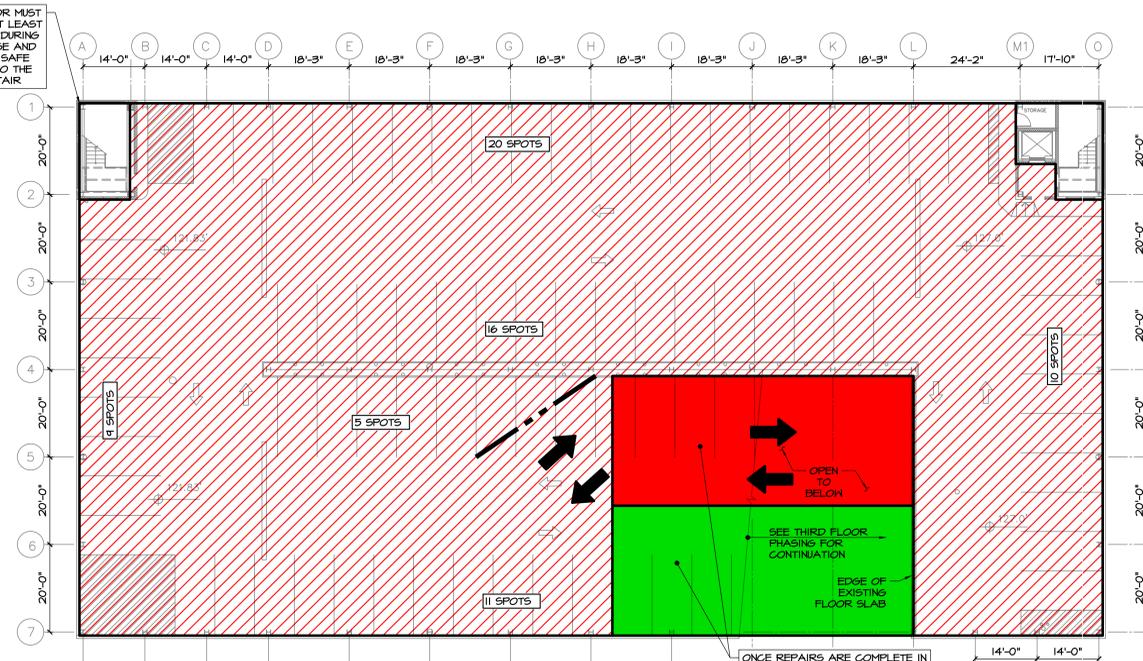
GROUND FLOOR SLAB ON GRADE PHASING PLAN
SCALE: 1/16" = 1'-0"



SECOND FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



THIRD FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



FOURTH FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"

PHASE 2A AND 2B
163 PARKING STALLS MAINTAINED

- LEGEND**
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 - CONTRACTOR CAN PERFORM ALL WORK REQUIRED AS NOTED ON PLANS
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 - DENOTES BARRICADE AND TEMPORARY FENCE

SEE NOTE 5/A IN THE GENERAL STRUCTURAL AND CONSTRUCTION NOTES ON 5001. GC IS STILL RESPONSIBLE FOR JOB SITE CONDITIONS AND SAFELY EXECUTING THE WORK REGARDLESS, INCLUDING TEMPORARY PROTECTIONS

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PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

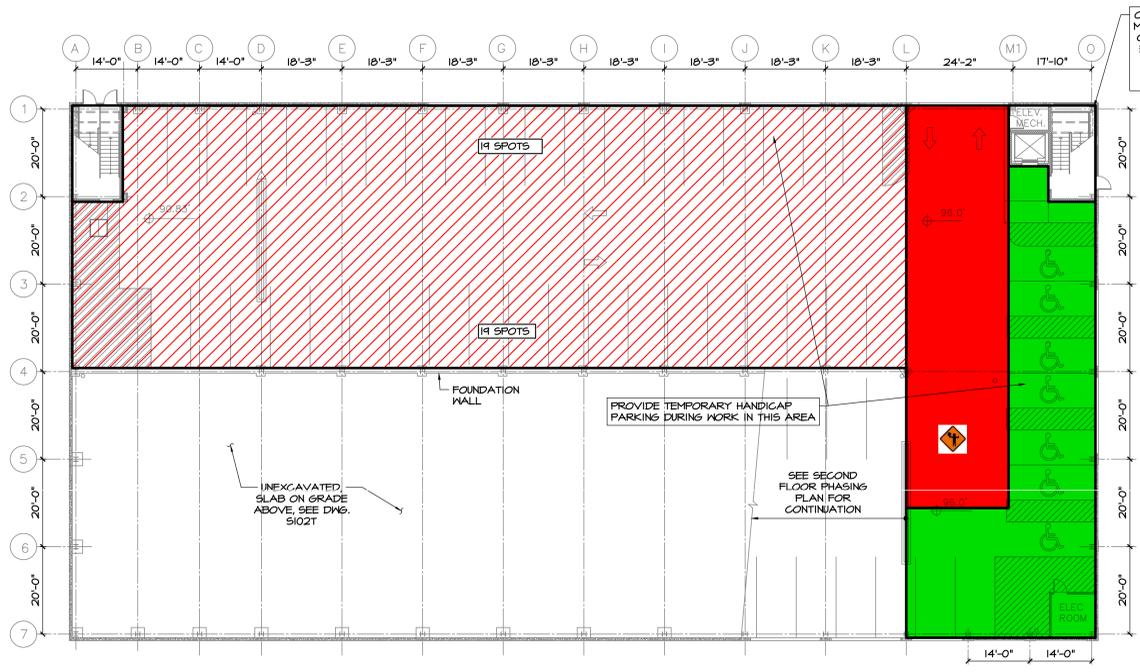
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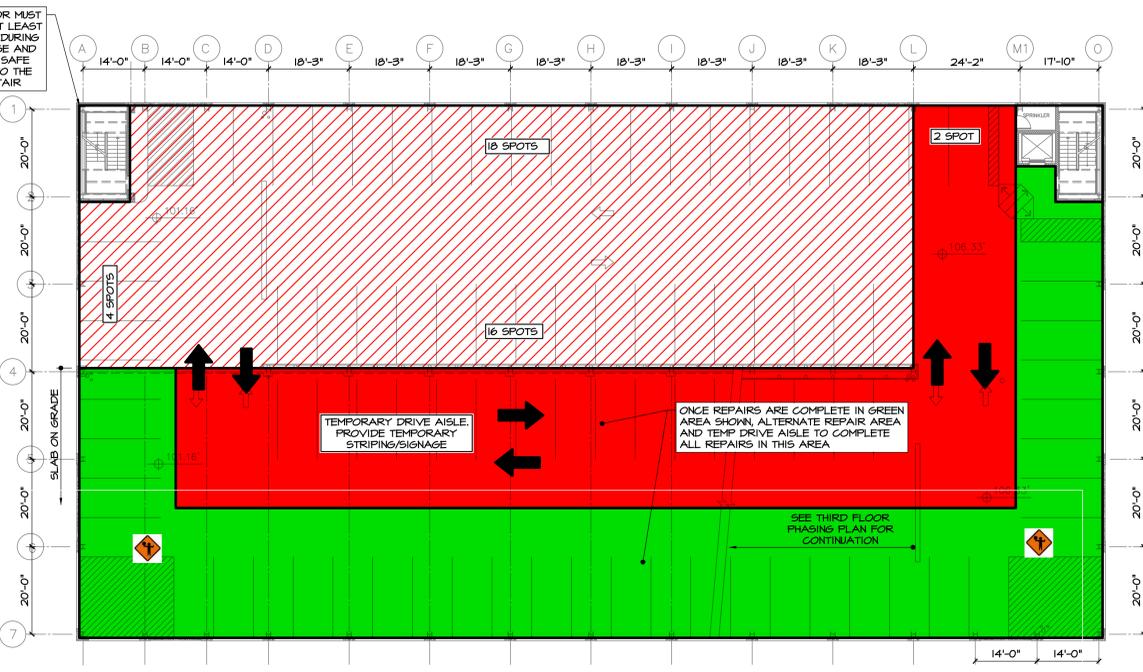
Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Block 246 / Lot 1
200 West 2nd Street
Plainfield, NJ 07063

Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KGM
Checked By: RES

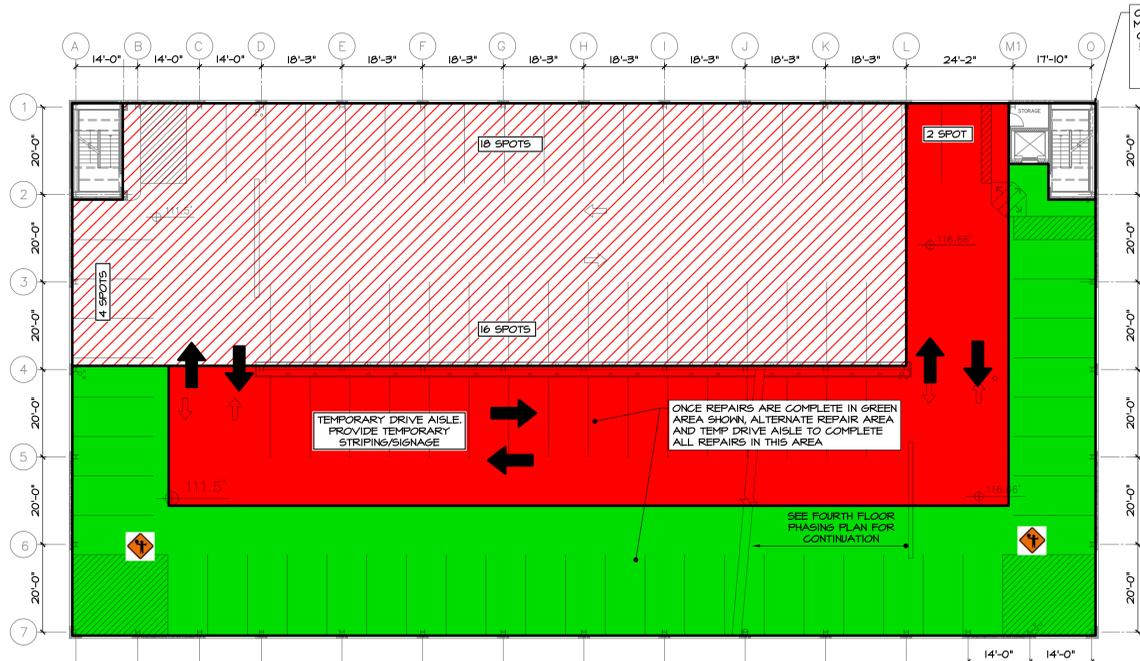
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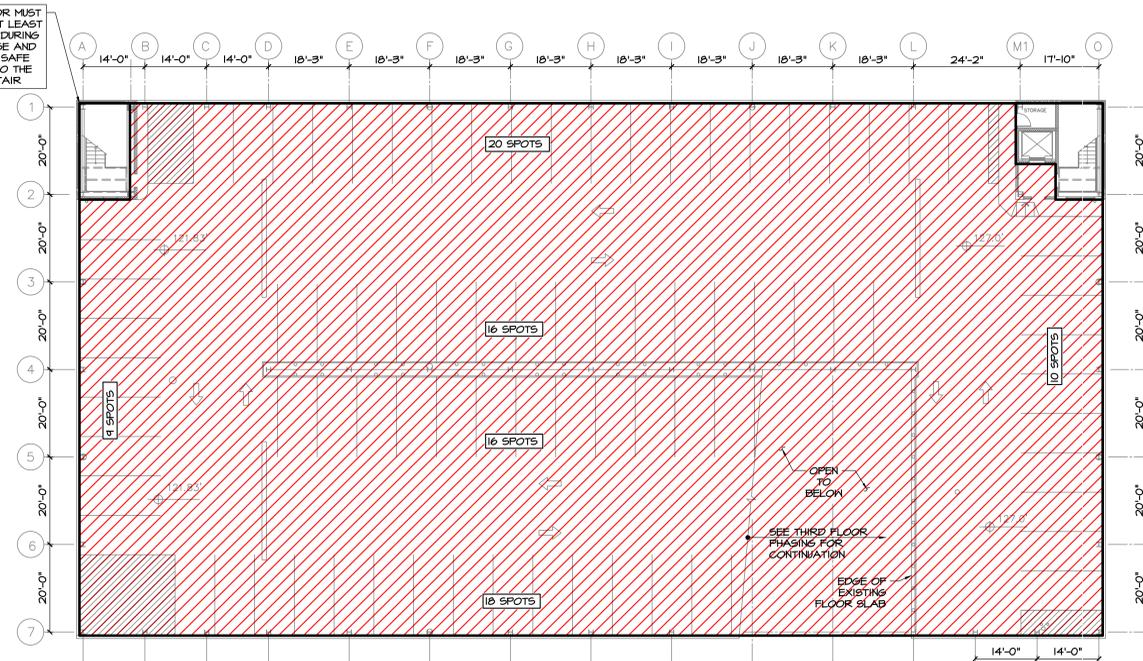
GROUND FLOOR SLAB ON GRADE PHASING PLAN
SCALE: 1/16" = 1'-0"



SECOND FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



THIRD FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"



FOURTH FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"

PHASE 3A AND 3B
224 PARKING STALLS MAINTAINED

- LEGEND**
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 - CONTRACTOR CAN PERFORM ALL WORK REQUIRED AS NOTED ON PLANS
 - X PROVIDE A FLAGGER AS NEEDED TO DIRECT TRAFFIC AT PINCH POINT
 - DENOTES BARRICADE AND TEMPORARY FENCE

SEE NOTE 5/A IN THE GENERAL STRUCTURAL AND CONSTRUCTION NOTES ON 5001. GC IS STILL RESPONSIBLE FOR JOB SITE CONDITIONS AND SAFELY EXECUTING THE WORK REGARDLESS, INCLUDING TEMPORARY PROTECTIONS

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Pennoni ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

Ross E. Stuart, PE
NJ PE GE55129

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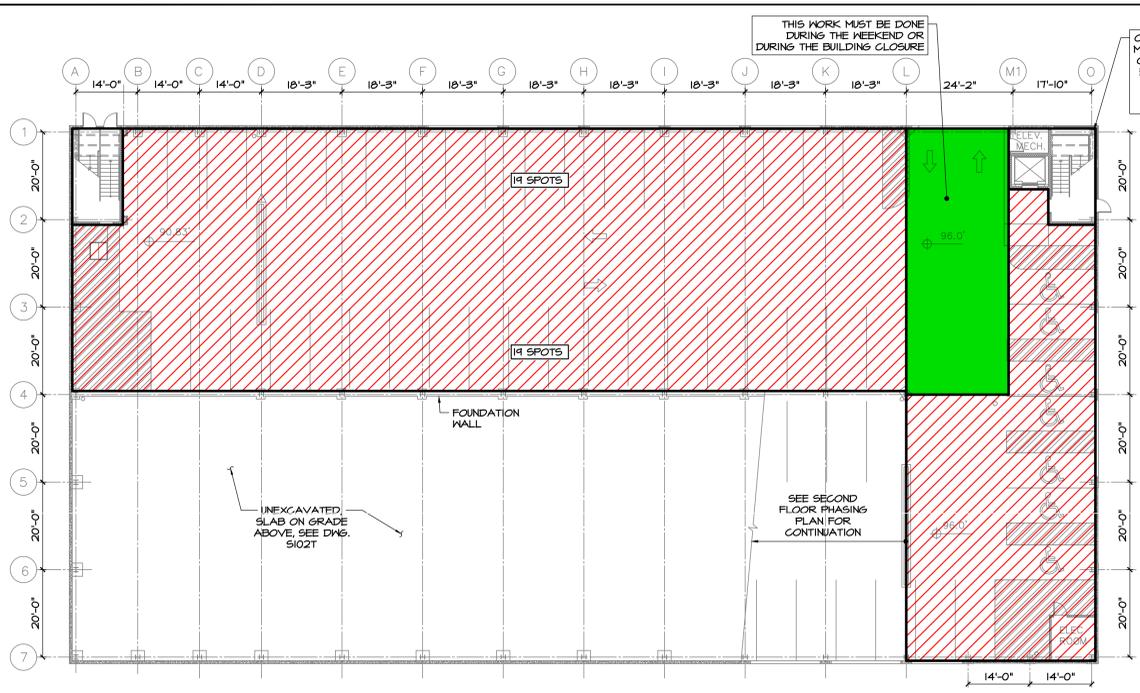
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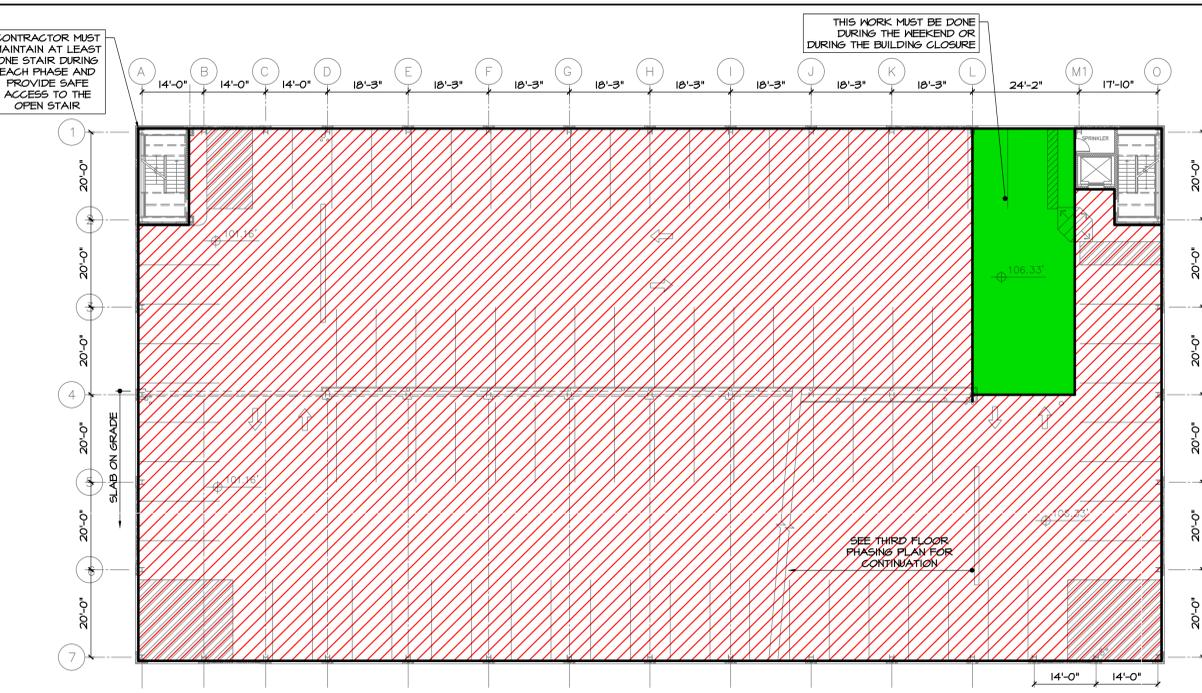
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Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
PHASE THREE PHASING PLANS

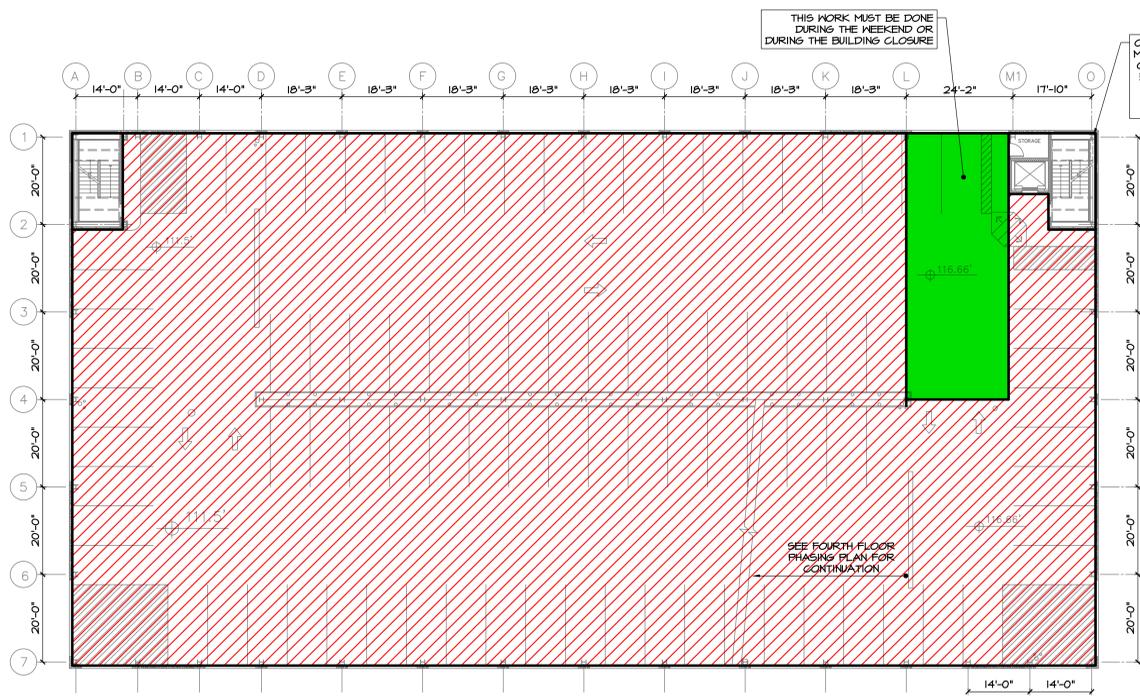
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PH003
Sheet 15 of 58



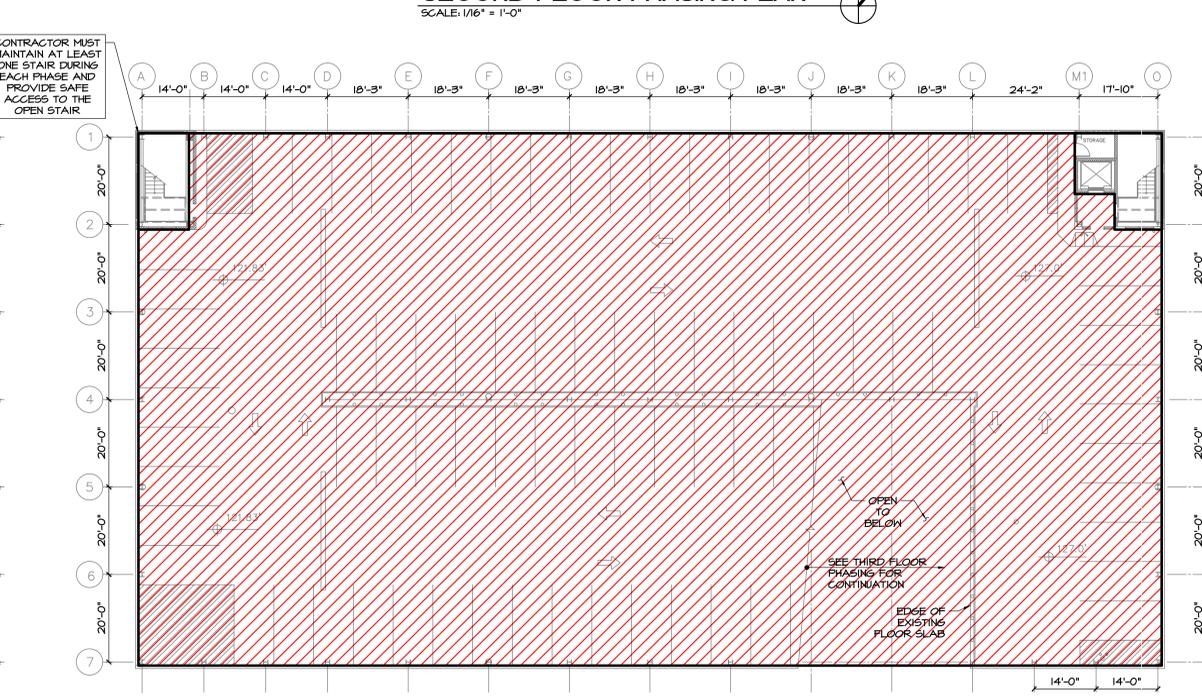
GROUND FLOOR SLAB ON GRADE PHASING PLAN
SCALE: 1/16" = 1'-0"
PROJECT NORTH



SECOND FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"
PROJECT NORTH



THIRD FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"
PROJECT NORTH



FOURTH FLOOR PHASING PLAN
SCALE: 1/16" = 1'-0"
PROJECT NORTH

PHASE 4

- LEGEND**
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SEE NOTE 5/A IN THE GENERAL STRUCTURAL AND CONSTRUCTION NOTES ON 5001. GC IS STILL RESPONSIBLE FOR JOB SITE CONDITIONS AND SAFELY EXECUTING THE WORK REGARDLESS, INCLUDING TEMPORARY PROTECTIONS

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Pennoni PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

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200 West 2nd Street
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Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
PHASE FOUR PHASING PLANS

Sheet No:
PH004
Sheet 16 of 58

GENERAL STRUCTURAL AND CONSTRUCTION NOTES

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2021 NEW JERSEY INTERNATIONAL BUILDING CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
2. ALL CODES AND STANDARDS REFERENCED IN THESE NOTES APPLY TO THE DESIGN, CONSTRUCTION, DEMOLITION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT.
3. THE STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL AND ALL OTHER APPLICABLE DISCIPLINE DRAWINGS...

DELEGATED DESIGN

- 1. ALL DESIGN REQUIREMENTS, LOADING, PERFORMANCE CRITERIA, SUBMISSION STANDARDS AND ANY OTHER APPLICABLE INFORMATION IS LOCATED IN THE GENERAL NOTES, DESIGN DATA, PLANS, SECTIONS, DETAILS AND SPECIFICATIONS (CONSTRUCTION DOCUMENTS) FOR THE DELEGATED DESIGN OF THE COMPONENTS NOTED BY BIDDING ON THIS PROJECT.
2. A BID SUBMISSION THAT DOES NOT INCLUDE THE REQUIRED DELEGATED DESIGN WILL RESULT IN THE REJECTION OF ANY AND ALL CONSTRUCTION PHASE SUBMISSIONS, RFIS AND SHOP DRAWINGS.
3. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS MAY SHOW DETAILS FOR DELEGATED DESIGN COMPONENTS...

DELEGATED DESIGNS:

- A. METAL STAIRS AND METAL RAILINGS: DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES.
B. BRACING, SHEETING, SHORING, FORMWORK, ETC.: REQUIRED TO INSURE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDINGS OR NEW CONSTRUCTION.
C. THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM: SEE THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM NOTES ON DRAWING 5005 AND DETAILS ON DRAWING 5400.

REPAIR SCHEDULE

Table with columns: REPAIR NUMBER, SYMBOL, REPAIR TYPE, DETAIL, QUANTITY, BASE BID (UNFORESEEN ALLOWANCE/CONTINGENCY), UNIT PRICE MEASUREMENT, REMARKS. Includes items 1 through 14 with various repair descriptions and quantities.

NOTES:

- 1. THE STRUCTURAL PLANS AND REPAIR SCHEDULE IS A REPRESENTATION OF THE EXISTING FIELD CONDITIONS OBSERVED BY PENNONI AND IS PROVIDED AS THE BASIS OF BID FOR THE CONTRACTOR.
2. THE FINAL COST OF THE REPAIRS WILL BE BASED UPON THE ACTUAL FIELD CONDITIONS AND MATERIAL QUANTITIES WITH THE SUBMITTED BASE BID UNIT PRICING.
3. REFER TO THE GENERAL NOTES AND PRODUCT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

STRUCTURAL ABBREVIATIONS

Table listing structural abbreviations and their full names, such as ADDL (ADDITIONAL), ANCH (ANCHOR ROD), APPROX (APPROXIMATE), etc.

DEMOLITION NOTES

- 1. THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING REGULATIONS:
A. ANSI A10.5 SAFETY REQUIREMENTS FOR MATERIAL HOISTS, LATEST EDITION.
B. ANSI 108 CONSTRUCTION AND DEMOLITION OPERATIONS - SCAFFOLDING - SAFETY REQUIREMENTS, LATEST EDITION.
C. OSHA (29 CFR) 1910 LATEST EDITION, INCLUDING SUBPART T AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL DEMOLITION REQUIREMENTS.
2. ALL SCAFFOLDING AND SHORING TO CONFORM TO THE RECOMMENDATIONS OF THE SCAFFOLDING AND SHORING INSTITUTE INCLUDING SAFETY AND ERECTION PROCEDURES.

NON-STRUCTURAL EXISTING CONDITIONS

- 1. FIELD VERIFY AND/OR ESTABLISH THE ALL EXISTING CONDITIONS, LOCATIONS, DIMENSIONS, ELEVATIONS, CONDITIONS, AND CLEARANCES OF EXISTING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL ELEMENTS, INCLUDING EXISTING CONSTRUCTION AND FINISHES, AND MEP CONSTRUCTION INCLUDING HVAC EQUIPMENT, DUCTWORK, LIGHTING, ELECTRICAL, CONDUIT, DUCTWORK, AND PIPING WHICH MAY BE AFFECTED BY THE REPAIR WORK.
2. THE CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AS REQUIRED TO PROTECT THE EXISTING CONSTRUCTION FROM DAMAGE DURING THE REPAIR WORK.
3. THE CONTRACTOR SHALL REVIEW THE EXISTING CONDITIONS IN THE FIELD PRIOR TO BIDDING. THE PRICE SUBMITTED FOR THE PROPOSED REPAIRS SHALL INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY SHORING AND PROTECTION, TEMPORARY AND/OR PERMANENT REMOVAL OR RELOCATION AND REINSTALLATION OF ARCHITECTURAL FINISHES, HVAC EQUIPMENT, DUCTWORK, PIPING, LIGHTING, CONDUIT, ETC. AS REQUIRED TO COMPLETE THE DESIGNATED REPAIRS.

Table with columns: No., Date, Description, Revisions / Issues.

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Pennoni ASSOCIATES INC. logo and contact information.

Ross E Stuart, PE NJ PE 055129

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Client: UNION COUNTY IMPROVEMENT AUTHORITY 10 Elizabethtown Plaza - 5th Floor Elizabethtown, NJ 07207
Project: GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Drawing Information: Project No: 25.022 Date: 11/03/25 Drawn By: KCM Checked By: RES
Sheet Name: STRUCTURAL NOTES

CAST-IN-PLACE CONCRETE

- 1. CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO THE ACI-308 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE'...
2. CAST-IN-PLACE CONCRETE AND CONCRETE REINFORCING REQUIRES SPECIAL INSPECTION AND TESTING IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND ABOVE REFERENCED CODES...
3. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (144 PCF +/-) WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE (II) MAXIMUM AGGREGATE SIZE SHALL BE 3/4" FOR WALLS AND SLABS...

- LHM CONSTRUCTION CHEMICALS - CRYSSTEX, MAPEI PLANITOP 18 ES OR 18 TG OR APPROVED EQUAL - 55 LBS.
• 3/8" MAX PEA GRAVEL 25-30LB
• LHM CONSTRUCTION CHEMICAL EVERBOND, MAPEI PLANICRETE AC OR APPROVED EQUAL - 2 QUARTS + 2 QUARTS WATER
b. SOFFIT REPAIR MORTARS:
HAND/TROWEL APPLIED UNDERSIDE: SIKAREPAIR SHA + SIKALATEX R, MAPEI PLANITOP X OR XS OR APPROVED EQUAL
c. REPAIR MORTAR AT ANODES: GALVASHIELD EMBEDDING MORTAR
d. ANTI-CORROSION COATING: CONPROCO ECB, MAPIFER 1K OR APPROVED EQUAL
e. REINFORCING STEEL: ASTM A615, GRADE 60
f. ADHESIVE TO ANCHOR REINF: HILTI HIT HY 200
g. SURFACE GALVANIC ANODE: VECTOR GALVASHIELD XP4, MAFESHIELD ANODES
h. SOFFIT GALVANIC ANODE: VECTOR GALVASHIELD XP4, MAFESHIELD ANODES
THE ABOVE REPAIR MATERIALS HAVE BEEN SELECTED AS THE BASIS OF DESIGN FOR THE PROPOSED CONCRETE REPAIRS. ALTERNATE EQUIVALENT MATERIALS MAY BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE ENGINEER, HOWEVER THE ENGINEER WILL BE THE SOLE JUDGE OF THE ACCEPTABILITY OF THE PROPOSED EQUIVALENT MATERIALS.

- 4. ALL ANCHORS SHALL MEET THE MINIMUM EMBEDMENT, SPACING, EDGE DISTANCES AND SIDE THICKNESS CRITERIA ESTABLISHED BY THE RELEVANT ICC-ESR REPORT. THE ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO THE EDGE OF CONCRETE OR MASONRY SURFACE.
5. EXISTING REINFORCING BARS IN THE CONCRETE OR MASONRY MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS NOTED OTHERWISE, THE REINFORCING BARS MAY NOT BE CUT. THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS (IF AVAILABLE) AND SHALL TAKE STEPS TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS USING NON-DESTRUCTIVE TESTING (FERROSCAN, GPR, X-RAY, OR OTHER APPROVED METHOD).
6. DRILL AND GROUT/EPOXY REINFORCING BAR DOWELS AS SHOWN ON THE PLANS, DETAILS AND AS APPROVED, UNLESS NOTED OTHERWISE, EMBED BARS AS REQUIRED TO DEVELOP THE FULL TENSION CAPACITY OF THE BAR.
7. EXCEPT WHERE INDICATED ON THE DRAWINGS, THE PREFERRED POST-INSTALLED ANCHORS ARE AS MANUFACTURED BY HILTI, INC. SUBSTITUTION OF THESE ANCHORS AND/OR USE OF ANY OTHER SPECIALTY ANCHORS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL. REFER TO THE POST-INSTALLED ANCHOR SCHEDULE ON THESE DRAWINGS FOR ADDITIONAL INFORMATION.
8. EPOXY CARTRIDGES SHALL UTILIZE THE CORRECT MIXING NOZZLE AS SUPPLIED BY THE MANUFACTURER. THE CONTRACTOR SHALL NOT RE-USE, MODIFY (CUT) OR REMOVE THE MIXING INSERT FROM THE MIXING NOZZLE.
9. THE CONTRACTOR SHALL UTILIZE APPROPRIATELY SIZED MESH SCREEN TUBES IN HOLLOW AND MULTI-HYTHE BRICK AND MASONRY APPLICATIONS.
10. ALL EPOXY ANCHORS THAT ARE TO BE INSTALLED HORIZONTALLY OR UPWARDLY INCLINED (OVERHEAD) ARE TO BE INSTALLED UTILIZING THE HILTI 'PISTON-PLUS' ACCESSORY, REGARDLESS OF THE EPOXY MANUFACTURER OR MODEL. USING AN EXTENSION TUBE AND RETAINING CAP IS NOT AN ACCEPTABLE METHOD AND SHALL BE REJECTED BY THE INSPECTOR.
11. ALL ANCHOR RODS, WASHERS, AND NUTS SHALL HAVE THE FOLLOWING CORROSION PROTECTIONS, UNLESS NOTED OTHERWISE:
A. INTERIOR USE, NON-CORROSIVE CONDITION - ZINC COATED PER ASTM B633
B. EXPOSED TO WEATHER OR IN CONTACT WITH PT LUMBER OR CORROSIVE INELUENT ELEMENTS - MECHANICALLY DEPOSITED ZINC COATING PER ASTM B645 OR HOT-DIP GALVANIZED (HDG) PER ASTM A153
C. NEAR SALT WATER OR EXTERIOR CORROSIVE ENVIRONMENTS - STAINLESS STEEL AISI 316
12. ALL ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED (OVERHEAD) TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY CERTIFIED PERSONNEL. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR AN APPROVED EQUIVALENT. THE CONTRACTOR SHALL SUBMIT CERTIFICATES FOR RECORD PRIOR TO INSTALLATION OF ANCHORS. THE ACCEPTABILITY OF CERTIFICATION OTHER THAN ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION SHALL BE THE RESPONSIBILITY OF THE EOR.
13. THE CONTRACTOR SHALL ARRANGE FOR AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ON-SITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED ON THE STRUCTURAL DRAWINGS. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLATION OF ANCHORS.
14. THE ANCHOR MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR TO REVIEW AND APPROVE THE CONTRACTOR'S INSTALLATION PROCEDURES.

MATERIAL SPECIFICATION - CAST-IN-PLACE CONCRETE MIX DESIGNS
Table with 5 columns: STRUCTURAL USE, EXPOSURE CLASS (F, S, W, C), AIR CONTENT, MAX. W/C RATIO, MINIMUM 28-DAY COMPRESSIVE STRENGTH, Fc. Row 1: NORMAL WEIGHT CONCRETE SLAB, F2, S0, W1, C2, 4.5% - 7.5%, 0.45, 5,000 PSI

MATERIAL SPECIFICATION - STRUCTURAL STEEL, BOLTS & WELDS
Table with 2 columns: SECTION TYPE, ASTM SPECIFICATION. Rows include: WIDE FLANGE, WF SHAPES (ASTM A992, GRADE 50); PLATES, ANGLES, CHANNELS, ETC (ASTM A36); STEEL PIPE (ASTM A53, GRADE B); HSS STEEL TUBING (RECTANGULAR, SQUARE & ROUND) (ASTM A500, GRADE C); GALVANIZED STRUCTURAL STEEL (ASTM A123, ASTM A153); ANCHOR RODS (ASTM F1554, GRADE 36, UNO); HIGH STRENGTH BOLTS, NUTS & WASHER ASSEMBLIES (ASTM F1554, GRADE 36, UNO); WELDING ELECTRODES (PERMITTED WELDING PROCESSES)

MATERIAL SPECIFICATION - REINFORCING STEEL
Table with 2 columns: REINFORCING TYPE, ASTM SPECIFICATION. Rows include: MILD-REINFORCING STEEL (REBAR) (ASTM A615, GRADE 60); EPOXY-COATED REINFORCING STEEL (REBAR) (ASTM A775, GRADE 60); WELDED WIRE REINFORCEMENT, WWR (ASTM A1064)

- 11. CONCRETE SHALL NOT BE PUMPED THROUGH ALUMINUM PIPES AND SHALL NOT BE PLACED IN CONTACT WITH ALUMINUM FORMS, MIXING DRUMS, BUCKETS, CHUTES, CONVEYORS OR OTHER EQUIPMENT MADE OF ALUMINUM.
12. PROVIDE 3/4" X 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS, UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
13. BONDING AGENT SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE.
14. NO SLEEVE SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE APPROVED SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE ENGINEER. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC. AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.
15. PLUMBING PIPES, ELECTRICAL CONDUITS, AND CORING OF CAST-IN-PLACE CONCRETE SLABS:
A. AT ELEVATED SLABS: PIPES OR CONDUITS PLACED IN SLABS SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/2 THE SLAB THICKNESS AND SHALL NOT BE SPACED CLOSER THAN 3 PIPE DIAMETERS TO EACH OTHER. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED WITHIN 12 INCHES OF COLUMN FACE OR FACE OF BEARING WALL. NO CONDUITS MAY BE PLACED IN EXTERIOR SLABS OR SLABS SUBJECT TO FLUIDS.
17. THE CONTRACTOR SHALL PROTECT THE CONCRETE FROM THE FOLLOWING IMMEDIATELY AFTER PLACEMENT:
A. PREMATURE / EARLY DRYING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS
B. HOT WEATHER, REFER TO ACI-305R 'HOT WEATHER CONCRETING'
C. COLD WEATHER / FREEZING, REFER TO ACI-306R 'COLD WEATHER CONCRETING'
D. EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, ETC
18. BEGIN THE SELECTED CURING METHOD OF CONCRETE SLABS WITHIN TWO HOURS AFTER SURFACE FINISHING OPERATIONS ARE COMPLETED. CURING METHOD SHALL REMAIN IN PLACE UNTIL THE CONCRETE HAS REACHED A MINIMUM OF 75% OF THE REQUIRED 28-DAY COMPRESSIVE STRENGTH.
19. ALL SURFACES SHALL BE MOIST CURED OR PROTECTED USING A MEMBRANE CURING AGENT, AND APPLIED AS SOON AS FORMS ARE REMOVED. IF MEMBRANE CURING AGENT IS USED, EXERCISE CARE NOT TO DAMAGE COATING.

- 2. CURE REPAIR WITH DURABLE COBERS AFTER FINISHING TO RETAIN MOISTURE & PREVENT DRY SHRINKAGE CRACKING.
3. ACTUAL REPAIR AREAS AND EXTENTS ARE TO BE BASED ON FIELD CONDITIONS. WHERE FIELD CONDITIONS DIFFER FROM THOSE INDICATED ON THE STRUCTURAL DRAWINGS, REFER TO THE REPAIR DETAILS AND METHODS INDICATED IN THE STRUCTURAL DRAWINGS FOR APPLICATION OF THE APPROPRIATE REPAIR DETAILS BASED ON THE EXISTING FIELD CONDITIONS AFTER REVIEW AND APPROVAL BY THE ENGINEER.
4. IF UNEXPECTED CONDITIONS ARE ENCOUNTERED, EITHER VARIATIONS IN EXISTING CONSTRUCTION OR VARIATION IN THE EXTENT OR MAGNITUDE OF DETERIORATION ARE ENCOUNTERED, CONTACT THE ENGINEER IMMEDIATELY FOR FURTHER DIRECTION.
5. IN THE EVENT NEW OR ADDITIONAL AREAS OF DETERIORATION, CRACKING, SPALL, OR DELAMINATION ARE IDENTIFIED DURING CONSTRUCTION, THE AREAS ARE TO BE REPAIRED IN ACCORDANCE WITH THE STRUCTURAL DRAWINGS WITH THE REVIEW AND APPROVAL OF THE ENGINEER.
6. REPAIR WORK SHALL BE PERFORMED UNDER THE RECOMMENDED PRACTICES OF THE APPROPRIATE ACI STANDARDS AND LATEST EDITIONS, ESPECIALLY IN REGARD TO REINFORCING STEEL SPLICES, ENDLAPS AND CONCRETE COVER DISTANCES.
7. NOTIFY ENGINEER AND OWNER FOR REVIEW OF PREPARED CONCRETE SUBSTRATE AND REINFORCING STEEL PRIOR TO PLACEMENT OF REPAIR MATERIALS. NOTIFY ENGINEER AND OWNER WITH SUFFICIENT TIME PRIOR TO PLACEMENT OF REPAIR MATERIALS TO ALLOW FOR REVIEW AND IMPLEMENTATION OF ADDITIONAL MEASURES AS DIRECTED BY THE ENGINEER.
8. CONTRACTOR TO BE CERTIFIED BY THE PRODUCT MANUFACTURERS FOR INSTALLATION OR USE OF THE PROPOSED PRODUCTS WHERE REQUIRED. THE USE AND INSTALLATION OF ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S RECOMMENDATIONS.
STRUCTURAL STEEL
1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 'STEEL CONSTRUCTION MANUAL', AISC 360 'SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS', AISC 303 'CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS' AND THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) 'SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS'.
2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY (AWS) D11 'STRUCTURAL WELDING CODE - STEEL'.
3. STRUCTURAL SECTIONS, SHAPES AND FASTENERS SHALL CONFORM TO THE ASTM SPECIFICATIONS LISTED IN THE STRUCTURAL STEEL MATERIALS SCHEDULE, UNLESS NOTED OTHERWISE.
4. HIGH-STRENGTH BOLTED CONNECTIONS HAVE BEEN DESIGNED BY PENNONI AND ARE DETAILED IN THESE CONSTRUCTION DOCUMENTS.
A. ALL BOLTED CONNECTIONS SHALL BE ASTM F1554 HIGH STRENGTH BOLTS AND BE A MINIMUM 3/4" DIAMETER, UNLESS NOTED OTHERWISE.
B. ALL BOLTS ARE TO BE INSTALLED "SNUG TIGHT" MINIMUM, UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS, AS REQUIRED BY AISC OR RCSC, OR AS NOTED ON CONNECTION DETAILS.
C. ALL BOLTED BEAM / GIRDER TO COLUMN CONNECTIONS ARE TO BE MADE WITH FULLY "PRE-TENSIONED" HIGH-STRENGTH BOLTS AS DEFINED BY AISC / RCSC.
D. ALL BOLTED BRACED OR TRUSS CONNECTIONS ARE TO BE "SLIP-CRITICAL" CONNECTIONS AS DEFINED BY AISC / RCSC.
E. THE STEEL FABRICATOR / ERECTOR MAY REQUEST ALTERNATE CONNECTION DETAILS IF SUCH DETAILS ARE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE STEEL FABRICATOR / ERECTOR IS RESPONSIBLE FOR PROVIDING THE DESIGN OF ALTERNATE DETAILS, AND CONNECTION CALCULATIONS ARE TO BE PROVIDED, SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE HAVING JURISDICTION OVER THE PROJECT, FOR REVIEW AND APPROVAL. THE STRUCTURAL ENGINEER OF RECORD SHALL BE THE SOLE JUDGE OF ACCEPTANCE OF ALTERNATIVES, AND THE CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE DETAILS SHOWN ON THESE DRAWINGS.

- 20. THE CONCRETE SLABS SHALL BE FINISHED FLAT AND LEVEL, TO THE ELEVATIONS DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONCRETE REQUIRED DUE TO FORMWORK AND FRAMING DEFLECTION TO ACHIEVE THIS FINISHED TOP OF SLAB ELEVATION. THE CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 5/8" AVERAGE THICKNESS FOR ADDITIONAL CONCRETE DURING PLACEMENT FOR ALL SLABS OVER THE ENTIRE FLOOR AREA. THE CONTRACTOR SHALL PROVIDE THE MEANS BY WHICH THE MAXIMUM AND MINIMUM CONCRETE SLAB THICKNESS CAN BE MONITORED AND VERIFIED DURING AND AFTER THE PLACING AND FINISHING OPERATIONS.
21. UNLESS NOTED OTHERWISE BY THE ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL FINISH THE CONCRETE FLATWORK TO THE FOLLOWING RANDOM TRAFFIC FLOOR FINISH TOLERANCES (ACI-117 4.8.5) WHEN MEASURED IN ACCORDANCE WITH ASTM E1155.
ELEVATED SLAB
SPECIFIED OVERALL Fp = 35 / Fl = 25^A
MINIMUM LOCAL Fp = 21 / Fl = 15^A
NOTE: ALL LEVELNESS F-NUMBERS APPLY ONLY TO SLABS-ON-GRADE AND ELEVATED SLABS THAT ARE SHORED AT THE TIME OF TESTING.
22. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STRIPPERS OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
23. LAP WELDED WIRE REINFORCEMENT TWO (2) FULL WIRE SPACES AT SPLICES AND WIRE TOGETHER.
24. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
25. TOLERANCES FOR CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 117.
26. THE MINIMUM CONCRETE STRENGTH REQUIRED FOR THE SUPPORT OF DEAD LOADS AND CONSTRUCTION LIVE LOADS IS 75% OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH. AT WHICH POINT ALL FORM, SHORING AND RE-SHORING CAN BE REMOVED UNLESS DETERMINED OTHERWISE BY THE FORMWORK ENGINEER. REFER TO ACI 347 'GUIDE TO FORMWORK FOR CONCRETE' FOR ADDITIONAL INFORMATION, INCLUDING STRIPPING TIMES AND DELEGATED DESIGN REQUIREMENTS.

- 5. THE CONTRACTOR IS REQUIRED TO SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL. SHOP DRAWINGS ARE TO INCLUDE:
A. COORDINATED DIMENSIONS OF MECHANICAL / ELECTRICAL EQUIPMENT REQUIRING SUPPORT, FLOOR AND ROOF PENETRATIONS, EDGES OF METAL DECK, ETC.
B. CLEARLY SHOW ALL SHOP WELDS AND SHOP BOLTED CONNECTIONS. CLEARLY SHOW ALL FIELD WELDS AND FIELD BOLTED CONNECTIONS.
C. CLEARLY SHOW ALL CUTS, HOLES, COPINGS, ETC. REQUIRED FOR OTHER TRADES OR EXISTING FIELD CONDITIONS THAT ARE TO BE MADE IN THE SHOP, CUTTING OR BURNING OF MAIN STRUCTURAL STEEL MEMBERS IS NOT PERMITTED IN THE FIELD.
7. THE GENERAL CONTRACTOR OR STEEL FABRICATOR / ERECTOR SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY FABRICATION OR ERECTION ERRORS, OR DEVIATIONS FROM THE CONTRACT DRAWINGS AND RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE. FAILURE TO NOTIFY THE STRUCTURAL ENGINEER IS AT THE CONTRACTOR'S RISK.
8. STEEL MEMBERS SHOWN ON THESE FRAMING PLANS ARE TO BE EQUALLY SPACED, UNLESS NOTED OTHERWISE.
9. FIELD WELDING TO THE EXISTING STEEL WILL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS, AND THE CONTRACTOR SHALL ANTICIPATE USING FIELD DRILLED AND BOLTED CONNECTIONS TO THE EXISTING STEEL. WHEN SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS TO WELD TO EXISTING STEEL, THE EXISTING STEEL FRAMING SHALL BE THOROUGHLY CLEANED TO ENSURE PROPER WELDING PREPARATION. THE CONTRACTOR / STEEL ERECTOR IS REQUIRED TO PROVIDE TEMPORARY SHORING OF THE EXISTING STEEL MEMBER ON BOTH SIDES OF THE WELD LOCATION. SHORING IS TO BE IN PLACE PRIOR TO, FOR THE DURATION OF, AND REMAIN IN PLACE AFTER WELDING HAS BEEN COMPLETED, UNTIL THE WELDS HAVE BEEN INSPECTED BY A CERTIFIED WELDING INSPECTOR (CWI) AND THE INSPECTION REPORTS ARE SUBMITTED TO, REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
10. THESE PLANS SHOW PRIMARY SUPPORT MEMBERS FOR THE SLAB. DURING PREPARATION, SUBMISSION, AND REVIEW OF SHOP DRAWINGS, ANY ADDITIONAL STEEL ANGLES OR MISCELLANEOUS ATTACHMENT DETAILS REQUIRED TO SUPPORT THE SLAB AT THE REQUIRED ELEVATION SHALL BE PROVIDED BY THE STEEL FABRICATOR / ERECTOR.
11. ALL EXPOSED INTERIOR STEEL SHALL BE THOROUGHLY CLEANED BY POWER TOOL CLEANING PRIOR TO PAINTING. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL BE CLEANED WITH COMMERCIAL BLAST CLEANING.

- 27. CAST-IN-PLACE CONCRETE ANCHORS:
A. ALL HEADED CONCRETE ANCHORS TO BE MANUFACTURED FROM MATERIAL WHICH CONFORMS TO ASTM A108 FOR LOW CARBON STEEL.
B. ALL WELDS TO BE MADE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE, ANSIVANS D11, LATEST EDITION AND WITH THE RECOMMENDATIONS OF THE STUD MANUFACTURER.
C. THE SPACING, MINIMUM EMBEDMENT, AND INSTALLATION OF THE ANCHORS TO BE IN ACCORDANCE WITH ACI 318 AND THE MANUFACTURER'S RECOMMENDED PROCEDURES.
D. THREADED STUD ANCHORS TO CONFORM WITH ASTM A108 AND THE NUTS TO CONFORM WITH ASTM A563.

CONCRETE REPAIR

- 1. THE 'CONCRETE REPAIR' NOTES ARE PROVIDED TO SUPPLEMENT THE 'CAST-IN-PLACE CONCRETE' GENERAL NOTES AND SHALL BE USED IN CONJUNCTION WITH THESE NOTES AS WELL AS THE OTHER GENERAL NOTES SECTIONS AND PROJECT SPECIFICATIONS.
2. THE TERM 'CONCRETE REPAIR' REFERS TO REPLACING, RESTORING, OR REPAIRING THE EXISTING CONCRETE CONSTRUCTION, INCLUDING REINFORCING STEEL AND CONCRETE SURFACES. CONCRETE REPAIR WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODES:
A. 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE', ACI 318, AMERICAN CONCRETE INSTITUTE (ACI).
B. 'CODE REQUIREMENTS FOR EVALUATION, REPAIR, AND REHABILITATION OF CONCRETE BUILDINGS', ACI 562, AMERICAN CONCRETE INSTITUTE (ACI).
C. 'MANUAL OF STANDARD PRACTICE, CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
D. 'USE OF EPOXY COMPOUNDS WITH CONCRETE', ACI 308R, AMERICAN CONCRETE INSTITUTE (ACI)
E. ALL APPLICABLE BUILDING CODES AND APPLICABLE LOCAL, CITY, STAT, AND FEDERAL CODES.
3. THE CONTRACTOR SHALL REVIEW THE EXISTING CONDITIONS IN THE FIELD PRIOR TO BIDDING. THE PRICE SUBMITTED FOR THE PROPOSED REPAIRS SHALL INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING TEMPORARY SHORING AND PROTECTION, TEMPORARY AND/OR PERMANENT REMOVAL OR RELOCATION AND REINSTALLATION OF ARCHITECTURAL FINISHES, HVAC EQUIPMENT, DUCTWORK, PIPING, LIGHTING, CONDUIT, ETC. AS REQUIRED TO COMPLETE THE DESIGNATED REPAIRS.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING FOR THE EXISTING STRUCTURE AND CONSTRUCTION AS REQUIRED DURING DEMOLITION AND REPAIR, REFER TO THE 'GENERAL' SECTION OF THE GENERAL NOTES FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AS REQUIRED TO PROTECT THE EXISTING CONSTRUCTION FROM DAMAGE DURING THE REPAIR WORK. IN THE EVENT THAT THE EXISTING CONSTRUCTION IS DAMAGED, THE CONTRACTOR SHALL RESTORE THE EXISTING CONSTRUCTION TO ITS ORIGINAL CONDITION.
6. THE CONTRACTOR SHALL SUBMIT MANUFACTURER'S DATA, PRODUCT INFORMATION, AND/OR MANUFACTURER'S CERTIFICATION FOR REVIEW AND APPROVAL OF ALL REPAIR MATERIALS. REPAIR MATERIALS SHALL BE AS FOLLOWS:
a. LATEX MODIFIED GROUT (SURFACE REPAIR)
• LATEX MODIFIED PEA-GRAVEL GROUT MIX WITH MINIMUM 28 DAY COMPRESSION OF STRENGTH 5000 PSI, COMPLETE WITH THE FOLLOWING COMPONENTS PER CUBIC FOOT.

- 1. ALL POST-INSTALLED AND SPECIALTY ANCHORS, INSTALLATION AND INSPECTIONS SHALL BE IN ACCORDANCE WITH ALL GOVERNING LOCAL MUNICIPAL REGULATIONS, ACI 318, IBC, RELEVANT ICC-ESR REPORTS AND ALL ANCHORS SHALL BE PREQUALIFIED PER ACI 308 TESTING.
2. ALL MECHANICAL AND EPOXY POST INSTALLED ANCHORS (IN CONCRETE OR MASONRY) ARE TO BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION (MPI) AS INCLUDED IN THE ANCHOR PACKAGING AND THE APPLICABLE ICC-ESR REPORT INCLUDING, BUT NOT LIMITED TO, DRILL BIT TYPE AND SIZE, PROPER CLEANING AND HOLE PREPARATION, INSTALLATION TORQUE, EMBEDMENT DEPTHS, CONCRETE TEMPERATURE RANGES, CONCRETE AGE, MOISTURE CONDITION, ETC.
3. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE ENGINEER OF RECORD. SUBSTITUTION REQUEST FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO USE. THE CONTRACTOR SHALL PROVIDE SIGNED AND SEALED CALCULATIONS, FROM A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION, DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

MATERIAL SPECIFICATION - POST-INSTALLED ANCHORS
Table with 4 columns: SUBSTRATE, ANCHOR TYPE, APPROVED HILTI ANCHORS (BASIS OF DESIGN), ALTERNATIVE ANCHORS (WITH APPROVAL, SEE NOTE #1). Rows include: CRACKED & UNCRACKED CONCRETE (SCREEN ANCHOR, EXPANSION ANCHOR, ADHESIVE ANCHOR); MASONRY (SCREEN ANCHOR, EXPANSION ANCHOR, ADHESIVE ANCHOR)

- NOTES:
1. TO UTILIZE ALTERNATIVE ANCHORS, THE CONTRACTOR MUST SUBMIT A FORMAL SUBSTITUTION REQUEST AND / OR SIGNED AND SEALED CALCULATIONS TO THE ENGINEER OF RECORD TO REVIEW AND APPROVE PRIOR TO USE.
2. ANCHOR IS APPLICABLE FOR USE IN UNCRACKED CONCRETE ONLY.
3. ANCHOR IS APPLICABLE FOR USE IN SOLID GROUT-FILLED CONCRETE MASONRY ONLY.
4. ANCHORS IN HOLLOW MASONRY UNITS AND HILTI-HYTHE MASONRY CONSTRUCTION ARE TO UTILIZE APPROPRIATELY SIZED MESH SCREEN TUBES, CONSULT WITH ANCHOR MANUFACTURER FOR APPROVED SCREEN TUBES.
5. ALL ANCHORS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, MPI.

Table with 2 columns: No., Date, Description, Revisions / Issues. Contains a table with 2 rows and 4 columns.

DiGroupArchitecture ARCHITECTURE FOR CHANGE
15 Belfary Street • New Brunswick, NJ 08901 • T: 732.249.8242
2400 W Hunting Park Ave., Bldg 9 • Philadelphia, PA 19129-1302 • T: 215.634.3400

PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD SUITE 2102
NEWARK, NJ 07102
T 973.255.9775 F 973.255.9774
NJ COA NO. GA28633300

Ross E Stuart, PE
NJ PE CE55129

DO NOT SCALE. DRAWING MAY BE PRINTED AT REDUCED SCALE. CONSULT WITH ARCHITECT FOR DIMENSIONS.

Client:
UNION COUNTY
IMPROVEMENT AUTHORITY
10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 07207

Project:
GERY B. GREEN PLAZA
PARKING GARAGE REPAIRS

Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
STRUCTURAL NOTES

Sheet No:
S002
Sheet 18 of 58

ADD ALTERNATE #4: THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM

- 1. PROVIDE THERMALLY SPRAYED PROPRIETARY ALUMINUM - ZINC - INDIUM (AZI) ALLOY CATHODIC PROTECTION SYSTEM SUPPLIED BY STRUCTURAL TECHNOLOGIES.
2. THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM SHALL PROVIDE CATHODIC PROTECTION OF THE REINFORCED CONCRETE STRUCTURE. THE ANODE IS A THERMALLY HEATED COATING SPRAYED ONTO THE CONCRETE SURFACE USING THE ELECTRIC ARC PROCESS WHERE METALS ARE ENERGIZED AND MELTED, THEN FLOWED TOWARDS A PREPARED SURFACE AT A HIGH RATE OF SPEED TO CREATE A DENSE COATING THAT ADHERES STRONGLY TO THE SUBSTRATE.
3. MATERIAL SPECIFICATION
- ADHESION STRENGTH 150 TO 350 PSI
- MAXIMUM CU CONTENT 100 PPM
- COATINGS DENSITY 3.246/GMS
- ESTIMATED LIFE, DEICING SALT ENVIRONMENT 15-20 YEARS
- OPEN CIRCUIT POTENTIAL IN -1.6 V (CSE)
SIMULATED PORE WATER SOLUTION
4. APPLICATION DATA
- MINIMUM RECOMMENDED THICKNESS 300 MICRONS (12MILS)
5. PRIOR TO APPLICATION OF THE SPRAYED ANODE, ABRASIVE BLAST CLEANING OF THE CONCRETE SURFACE SHALL BE PERFORMED TO PROVIDE ADEQUATE BONDING BETWEEN THE CONCRETE AND SPRAYED ANODE.
6. ABRASIVE BLASTING SHALL NOT COMMENCE BEFORE CONCRETE REPAIRS ARE COMPLETED AND ALL PATCH MATERIALS HAVE PROPERLY CURED.
7. STEEL CONNECTIONS WILL BE MADE BY DIRECT CONTACT OF THE METALLIZED ANODE WITH EXISTING PRE-STRESSING STRANDS. CONNECTION SHALL BE ACHIEVED AT 3"x3" CONCRETE OPENINGS AT EACH PRE-STRESSING STRAND. ALL CORNERS OF THE CONCRETE OPENINGS SHALL BE ROUNDENED/HAMMERED TO ASSURE ELECTRICAL CONTACT OF THE METALLIZED ANODE AROUND CORNERS/SURFACES.
8. ALL CONCRETE OPENINGS SHALL BE REPAIRED WITH EPOXY FOLLOWING APPLICATION OF THE METALLIZED ANODE.
9. ALL LEAD WIRES FOR MONITORED CONNECTIONS WILL BE OF SUFFICIENT LENGTH TO REACH THE JUNCTION BOX/TERMINATION BOX WITHOUT SPLICES.
10. ANODE PLATE LOCATIONS CAN BE MOVED 4 FT FROM LOCATIONS SHOWN TO FACILITATE THE MONITORED ANODE CONNECTION AND AVOID EXISTING PRE-STRESSING STRANDS.
11. JUNCTION/TERMINATION BOXES WILL BE INSTALLED ON A MINIMUM OF ONE (1) FILIGREE BEAMS AND ONE (1) FILIGREE BEAM. JUNCTION BOX SHALL BE LOCATED NEAR THE CENTER OF THE ISOLATED, PROTECTED SURFACE AREA OF EACH STRUCTURAL ELEMENT TYPE.
12. EACH JUNCTION/TERMINATION BOX SHALL BE CLEARLY LABELED AND SECURED TO THE STRUCTURE.
13. LOCATION OF JUNCTION/TERMINATION BOXES TO BE FINALIZED ON-SITE.
14. THE ELECTRICAL CONTINUITY OF CONVENTIONAL STEEL REINFORCEMENT WITHIN THE STRUCTURE MUST BE TESTED.
15. ALL ZONES WILL BE INSPECTED BOTH VISUALLY AND USING GROUND PENETRATING RADAR TO LOCATE ANY HARDWARE OR OTHER METALLIC OBJECTS WHICH MAY BE AT RISK FROM STRAY CURRENT CORROSION.
16. ANY ELEMENTS WHICH ARE FOUND TO BE DISCONTINUOUS SHALL BE EITHER BONDED INTO THE SYSTEM OR IN THE CASE OF SMALLER ITEMS REMOVED FROM THE STRUCTURE.
17. ALL TESTING SHALL BE CARRIED OUT USING A DC RESISTANCE METER WITH A MINIMUM OF 200 MILLI-AMP TEST CURRENT AND RESULTS RECORDED ON THE APPROPRIATE TEST FORM.
18. CABLES INSTALLED AT MONITORED LOCATIONS SHALL BE ROUTED TO THE JUNCTION/TERMINATION BOXES IN CABLE CHASES CUT INTO THE CONCRETE WHERE POSSIBLE. IF EXISTING DEPTH OF CABLES COVERS WOULD REQUIRE CUTTING OF REINFORCEMENT TO ACHIEVE THE REQUIRED CABLE CHASE DEPTH, CABLES WILL BE ROUTED TO THE JUNCTION/TERMINATION BOX IN SURFACE MOUNTED 1-1/4" SCH 40 PVC CONDUITS.
19. APPLY A WATER-BASED, HIGH-BUILD, 100% ACRYLIC, WATERPROOF TOP COATING APPLIED AFTER COMPLETION OF METALLIZING SPRAY. COATING TO BE BASF MASTERPROTECT HB 400 OR APPROVED EQUAL.

STATEMENT OF SPECIAL INSPECTIONS

- 1. THIS PROJECT REQUIRES SPECIAL INSPECTIONS IN ACCORDANCE WITH THE BUILDING CODE, SECTION 11 AND ANY STATE / LOCAL PROVISIONS DEEMED NECESSARY BY THE BUILDING OFFICIAL.
2. INSPECTION IS REQUIRED OF ALL CONSTRUCTION DELINEATED ON THESE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS.
3. INSPECTION AND TESTING SHALL BE PERFORMED AT THE OWNER'S EXPENSE. THE OWNER SHALL RETAIN A QUALIFIED INSPECTOR / INSPECTION AGENCY, SUBJECT TO APPROVAL BY THE LOCAL AUTHORITY HAVING JURISDICTION, TO PERFORM ALL THE NECESSARY INSPECTIONS.
4. THE ENGINEER OF RECORD (EOR) IS NOT RESPONSIBLE TO PERFORM OR OBTAIN THE INSPECTION AND TESTING SERVICES AS PART OF THE DESIGN SERVICE. STRUCTURAL SITE VISITS AND SITE OBSERVATION REPORTS (SORS) ISSUED BY THE EOR ARE TO ASCERTAIN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ARE NOT TO BE CONSTRUED AS MEETING SPECIAL INSPECTION REQUIREMENTS.
5. THE ARCHITECT, WITH INPUT FROM THE ENGINEER OF RECORD, IS RESPONSIBLE FOR PREPARING AND SUBMITTING THE 'STATEMENT OF SPECIAL INSPECTIONS' IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE SECTION 1705, AND ANY LOCAL PROVISIONS DEEMED NECESSARY BY THE BUILDING OFFICIAL.
6. THE ENGINEER OF RECORD WILL NOT AUTHORIZE ANY FINAL COMPLIANCE FORMS REQUIRED BY THE LOCAL BUILDING OFFICIAL FOR OBTAINING A CERTIFICATE OF OCCUPANCY IF THE REQUIREMENTS FOR INSPECTIONS HAVE NOT BEEN SUBMITTED FOR REVIEW AND APPROVAL.
7. THE EOR IS NOT RESPONSIBLE FOR CONSTRUCTION SITE SAFETY AND IS NOT REQUIRED TO INSPECT THE WORK FOR COMPLIANCE WITH OSHA REGULATIONS.
8. THE SPECIAL INSPECTION AGENCY SHALL REVIEW THE REQUIRED INSPECTIONS, TESTING AND TEST PROCEDURES WITH THE OWNER, GENERAL CONTRACTOR, ARCHITECT AND EOR PRIOR TO THE GENERAL CONTRACTOR PERFORMING ANY RELATED CONSTRUCTION ACTIVITIES.
9. THE GENERAL CONTRACTOR WILL PROVIDE THE SPECIAL INSPECTION AGENCY WITH ADEQUATE NOTICE WHEN REQUESTING INSPECTIONS AND TESTING, AND PROVIDE AN ANTICIPATED SCHEDULE OF CONSTRUCTION ACTIVITIES REQUIRING SPECIAL INSPECTIONS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING SAFE ACCESS TO THE WORK FOR REQUIRED SPECIAL INSPECTIONS.
10. THE SPECIAL INSPECTION AGENCY SHALL KEEP COMPREHENSIVE RECORDS OF ALL INSPECTIONS AND TESTING AND FURNISH DAILY FIELD REPORTS TO THE CONTRACTOR, ARCHITECT AND EOR FOR RECORD. AT THE COMPLETION OF CONSTRUCTION, THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT OF SPECIAL INSPECTIONS, DOCUMENTING ALL REQUIRED SPECIAL INSPECTIONS AND TESTING THAT HAS BEEN COMPLETED, AS WELL AS DESCRIBE ANY CORRECTIONS OF DISCREPANCIES THAT MAY HAVE OCCURRED DURING CONSTRUCTION, TO THE BUILDING OFFICIAL, OWNER, CONTRACTOR, ARCHITECT AND EOR.
11. THE SPECIAL INSPECTION SCHEDULE BELOW INDICATES THE MINIMUM REQUIRED STRUCTURAL CONSTRUCTION ACTIVITIES AND MATERIALS THAT REQUIRE SPECIAL INSPECTIONS AND TESTING. THIS SCHEDULE IS NOT COMPREHENSIVE OF ALL INSPECTIONS AND TESTING REQUIRED FOR THE PROJECT, OR BY THE REFERENCED BUILDING CODE OR BUILDING OFFICIAL. REFER TO EACH DISCIPLINE / CONSTRUCTION TRADE'S CONSTRUCTION DRAWINGS FOR ADDITIONAL INSPECTIONS REQUIRED ON THE PROJECT.

STRUCTURAL OBSERVATIONS

- 1. THE PROJECT IS EXEMPT FROM THE REQUIREMENTS OF IBC SECTION 1704.6 OF IBC 2018 FOR STRUCTURAL OBSERVATIONS.

MATERIAL SPECIFIC SPECIAL INSPECTION REQUIREMENTS

CAST-IN-PLACE CONCRETE

- 1. THE INSPECTION AGENCY SHALL PREPARE CONCRETE TEST CYLINDERS FROM EACH DAY'S POUR. CYLINDERS SHALL BE PROPERLY CURED AND STORED. SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172.
2. RETAIN A LABORATORY TO PROVIDE TESTING SERVICES. TEST CONCRETE FOR SLUMP PER ASTM C445, AIR CONTENT PER ASTM C231 OR C173, CYLINDER SAMPLES AND TESTS PER ASTM C31 AND C39. CAST ONE (1) SET OF SIX (6) 4"X8" CYLINDERS FOR EACH 50 CUBIC YARDS PLACED AND FOR EACH MIX USED PER DAY. REPORTS OF ALL TESTS TO BE SUBMITTED TO THE ENGINEER.
3. PRIOR TO PLACEMENT OF CONCRETE, A FIELD REPRESENTATIVE SHALL BE INFORMED A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE OF PLACEMENT TO ALLOW FOR INSPECTION OF REINFORCING STEEL. PLACEMENT OF CONCRETE SHALL NOT START UNTIL PLACEMENT OF REINFORCING STEEL HAS BEEN APPROVED BY THE INSPECTION AGENCY.

STRUCTURAL STEEL

- 1. THE STEEL STRUCTURE AND ITS CONNECTIONS ARE REQUIRED TO HAVE SPECIAL INSPECTIONS.
2. THE SPECIAL INSPECTOR IS TO PERFORM ALL REQUIRED PRE-INSTALLATION AND POST-INSTALLATION INSPECTIONS AND TESTING OF HIGH-STRENGTH BOLTED FASTENER ASSEMBLIES.
3. THE CERTIFIED WELDING INSPECTOR (CWI) IS TO PERFORM ALL WELDING VISUAL INSPECTIONS AND NON-DESTRUCTIVE TESTING (NDT). THE STEEL ERECTOR IS TO PROVIDE ALL REQUIRED WELDER QUALIFICATIONS, WELDING PROCEDURE SPECIFICATIONS (WPS), ETC TO THE CWI AS REQUESTED.
4. THE FOLLOWING NON-DESTRUCTIVE TESTING (NDT) IS REQUIRED AT MINIMUM FOR ALL FIELD WELDED CONNECTIONS:

- A. VISUALLY INSPECT 100% OF FIELD FILLET WELDS AND FINISHED MULTI-PASS WELDS. WELDS FAILING VISUAL INSPECTIONS ARE TO BE REPAIRED PRIOR TO PERFORMING ANY NDT.
B. PERFORM MAGNETIC PARTICLE TESTING (MT), IN ACCORDANCE WITH ASTM E109, ON THE ROOT PASS AND FINISHED WELDS OF MULTI-PASS WELDS AND FIELD FILLET WELDS. TESTING IS REQUIRED ON 10% OF ALL MULTI-PASS AND FIELD FILLET WELDS IN PRIMARY CONNECTIONS.
C. PERFORM ULTRASONIC TESTING (UT), IN ACCORDANCE WITH ASTM E164, ON 100% OF COMPLETE JOINT PENETRATION (CJP) WELDS, AND FIELD WELDED BEAM-COLUMN MOMENT CONNECTIONS. WELDS FOUND TO BE FAILING (U) SHALL BE CUT OUT, FIELD FIT / PREPARED, RE-WELDED AND INSPECTED.
5. WELDED SHEAR STUDS ARE TO BE INSPECTED AND TESTED IN ACCORDANCE WITH THE FOLLOWING:

- A. PERFORM A BEND TEST ON 5% OF SHEAR STUDS (OR A MINIMUM OF (2) STUDS PER BEAM). BEND STUD TO A PERMISSIBLE 15" MAXIMUM IN ANY DIRECTION FROM PLUMB.
B. VISUALLY INSPECT AND 'RING' EVERY STUD USING A HAMMER. STUDS FAILING TO GIVE A RESONATING SOUND WILL NEED TO BE BEND TESTED TO 15" MAXIMUM OR FAILURE.
C. REPLACE ALL FAILING STUDS

POST-INSTALLED MECHANICAL & ADHESIVE ANCHORS

- 1. THE OWNER'S TESTING AGENCY SHALL OBSERVE THE INITIAL INSTALLATION OF EACH ANCHOR TYPE AND DURING CONSTRUCTION AT INTERVALS IN ACCORDANCE WITH THE IBC CHAPTER 17 AND ACI 308.
2. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR VERTICALLY INCLINED (OVERHEAD) TO SUPPORT SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY OBSERVED BY THE SPECIAL INSPECTOR. ALL OTHER ANCHORS MAY BE OBSERVED PERIODICALLY.
3. THE SPECIAL INSPECTOR SHALL PROVIDE WRITTEN REPORTS TO THE ENGINEER OF RECORD AND BUILDING OFFICIAL THAT INDICATE THE MATERIALS USED AND THE INSTALLATION PROCEDURES FOLLOWED ARE IN GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. THE REPORTS SHALL ALSO INCLUDE DESCRIPTIONS OF THE MATERIALS USED AND PROCEDURES FOLLOWED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
A. ANCHOR INSTALLATION ENVIRONMENT (DRY OR SATURATED CONCRETE / MASONRY; CONCRETE / MASONRY TEMPERATURE, AMBIENT AIR TEMPERATURE)
B. DESCRIPTION OF THE DRILLING METHOD (DRILL BIT DIAMETER, DEPTH, ETC)
C. DESCRIPTION OF THE HOLE CLEANING PROCEDURE FOR THE SELECTED ANCHOR TYPE
D. DESCRIPTION OF THE SELECTED ANCHOR TYPE AND SIZE RANGE (MECHANICAL / ADHESIVE ANCHOR, THREADED ROD / REINFORCING BAR / OTHER) AND IF APPLICABLE, DESCRIPTION OF THE SELECTED EPOXY SERIES AND EXPIRATION DATES.

STATEMENT OF SPECIAL INSPECTIONS SCHEDULE table with columns: TYPE & EXTENT OF INSPECTIONS / TESTS, FREQUENCY OF INSPECTION. Rows include Structural Steel (IBC 1705.2), Concrete Construction (IBC 1705.3), and Reinforcing Steel.

NOTES:

- 1. FREQUENCY OF INSPECTIONS ARE DEFINED AS:
A. PERIODIC INSPECTION: PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
B. CONTINUOUS INSPECTION: FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AFTER COMPLETION OF THE WORK.
2. SHOP INSPECTIONS OF ANY APPROVED FABRICATORS MAY BE WAIVED BY THE BUILDING OFFICIAL OR EOR. IF SHOP INSPECTIONS ARE WAIVED A FABRICATOR'S CERTIFICATE OF COMPLIANCE SHALL BE SUBMITTED TO THE EOR FOR REVIEW AND RECORD.

PARKING LEVEL DESIGN LOADS table with columns: DESCRIPTION, VALUE (PSF). Rows include Dead Load (Miscellaneous Superimposed Loads: 5, Existing 6" Total Thickness NAC Filigree Slab: 75, Total: 80) and Live Load (Basic Live Load (L): 40).

(1) OR 3,000# CONCENTRATED LOAD OVER A 4.5'X4.5' AREA

Revisions / Issues table with columns: No., Date, Description.

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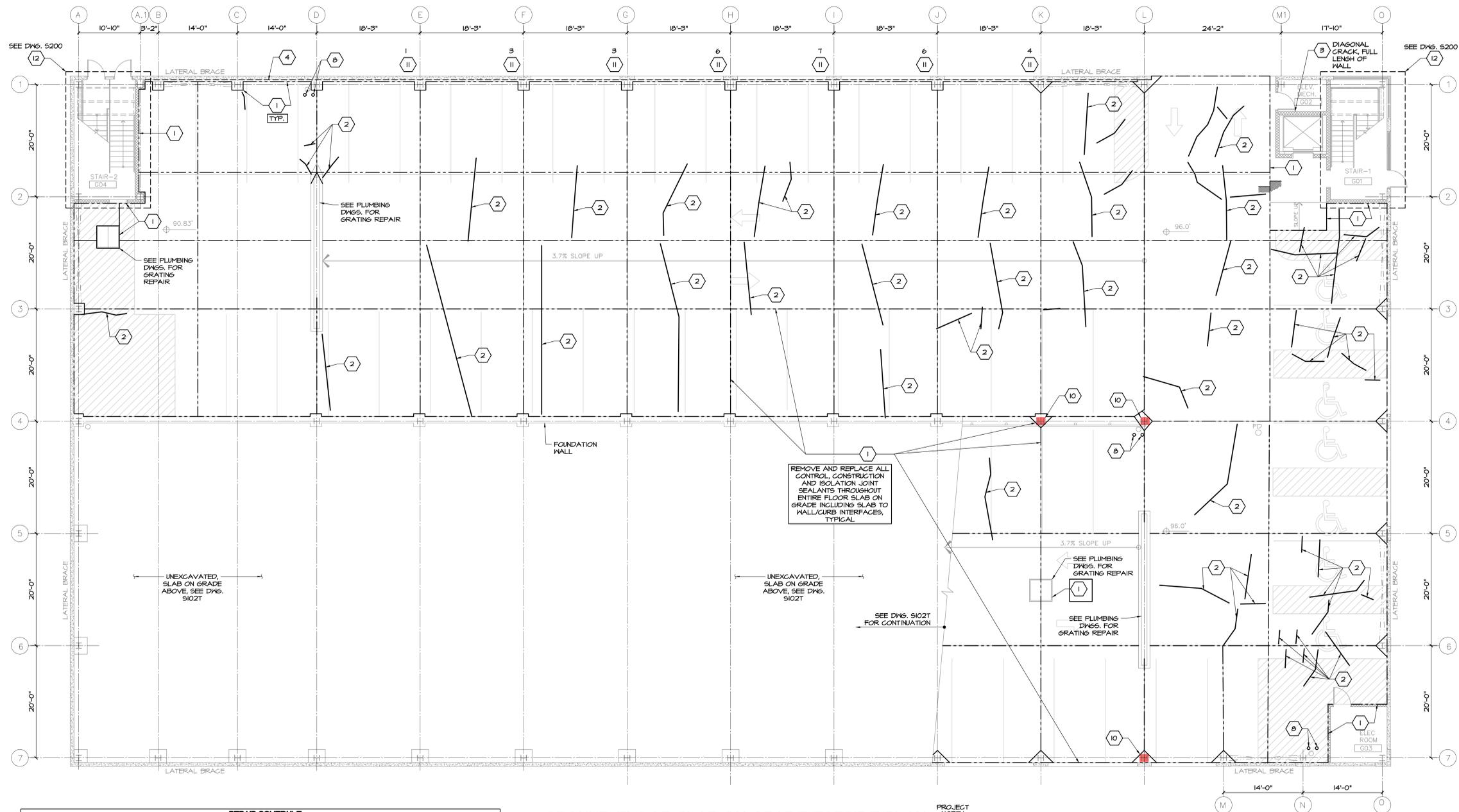
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Client: UNION COUNTY IMPROVEMENT AUTHORITY
10 Elizabethtown Plaza - 5th Floor
Elizabethtown, NJ 07207
Project: GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Block 246 / Lot 1
200 West 2nd Street
Plainfield, NJ 07063
Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

STRUCTURAL NOTES

Sheet No:



REPAIR SCHEDULE						
REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL	REPAIR NUMBER	SYMBOL	REPAIR TYPE
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5301, 2/5301 & 3/5301	12	N/A	DEMOLISH AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL FRAMING, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300	13	N/A	INSTALL TRAFFIC COATING ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS.
3	~	CMU WALL CRACK REPAIR	7/5300	14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM TO UNDERSIDE OF ALL BASE BID FILLGREE SLABS.
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.I.P. FOUNDATION WALL AT LINE I)	4/5301	15	■	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER.
5	■	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300	16	○	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"
6	■	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	17	○	REPLACE WHEEL STOPS ANCHORED TO SLAB
7	■	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	18	■	PRECAST SPANDREL BEAM END REPAIR
8	○	REMOVE AND REPLACE BOLLARDS	5/5400	19	■	PRECAST SPANDREL BEAM CORNER REPAIR
9	■	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE PLUMBING DWGS.	DETAILS 1 THRU 3/5302			
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, FOURSTOPS, FLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301			
11	■	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAM/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301			

GROUND FLOOR SLAB ON GRADE TOPSIDE PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES:

- REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
- EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGRAMMATIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXISTING CONDITIONS.
- EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS, SIZES AND LAYOUT GEOMETRY OF CRACKS, SPALLS, STEEL CORROSION AND OTHER DEFICIENCIES NOTED TO BE REPAIRED ARE SHOWN DIAGRAMMATICALLY, ARE FOR SCOPE DEFINITION ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES, DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
- REFER TO M.E.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS.
- REFER TO DRAWINGS S001 THRU S003 FOR STRUCTURAL NOTES.
- REFER TO S800 SERIES DRAWINGS FOR TYPICAL DETAILS.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
- CONTRACTOR TO REPLACE ALL PAINTED PARKING AND TRAFFIC STRIPING, IN KIND.
- COORDINATE TIMING AND PHASING OF THE WORK, TEMPORARY SAFETY BARRIERS/FENCING, CONTRACTOR MATERIAL STORAGE AREA, TEMPORARY SIGNAGE, USE RESTRICTIONS AND BUILDING CLOSURES WITH THE OWNER. SEE PHASING DRAWINGS, ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

LEGEND
SEE REPAIR SCHEDULE FOR ADDL GRAPHIC SYMBOLS

- SLAB JOINT REPAIR, SEE NOTE #1
- ~ EXISTING CHAIN LINK FENCE OR VEHICLE GUARDRAIL
- EXISTING PAINTED TRAFFIC AND PARKING MARKINGS

SEE DRAWING S001 FOR BASE BID QUANTITIES AND BIDDING REQUIREMENTS AND NOTES.

0 01/07/2025 ISSUED FOR BID
No. Date Description
Revisions / Issues

DiGroupArchitecture
ARCHITECTURE FOR CHANGE
15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
2450 W. Hunting Park Ave., Bldg 9 • Philadelphia, PA 19128-1302 • T: 215.634.3400

PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

Ross E. Stuart, PE
NJ PE GE55129

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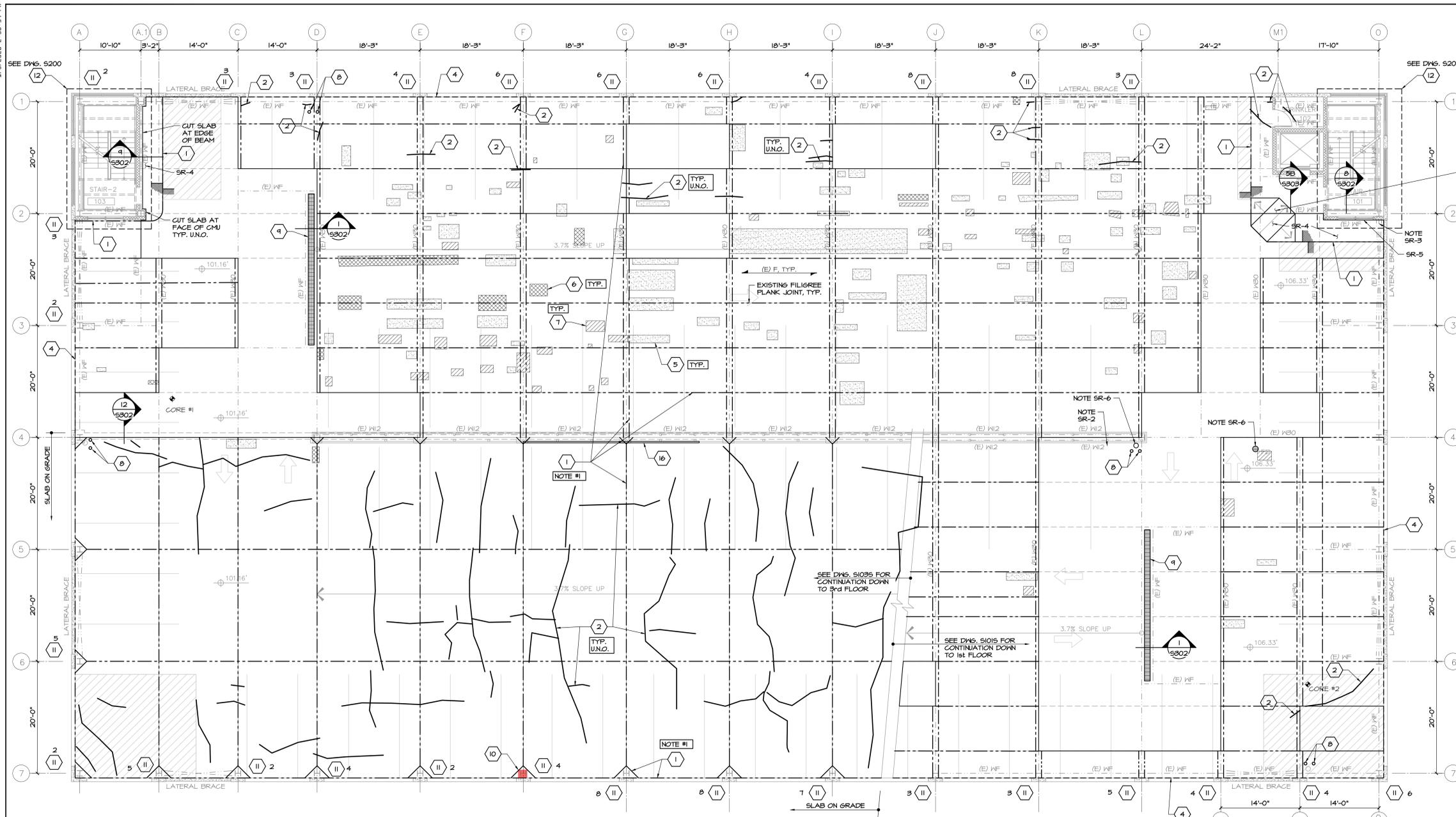
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Sheet Name:
GROUND FLOOR TOPSIDE PLAN

Sheet No:
S101T
Sheet 20 of 58



IF BASE BID FLOOR SLAB REPLACEMENT IS SELECTED, SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE RAMP TOPPING IN ITS ENTIRETY.

SECOND FLOOR TOPSIDE PLAN

SCALE: 1/8" = 1'-0"

REPAIR SCHEDULE			
REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5300, 2/5301 & 3/5301
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300
3	~	CMU WALL CRACK REPAIR	7/5300
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.I.P. FOUNDATION WALL AT LINE I)	4/5302
5	■	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300
6	■	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300
7	■	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300
8	○	REMOVE AND REPLACE BOLLARDS	5/5400
4	■	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE FLUMBING DWGS.	DETAILS 1 THRU 3/5302
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, FOURSTOPS, FLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301
11	■	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAM/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301

SEE DRAWING 5001 FOR BASE BID QUANTITIES AND BIDDING REQUIREMENTS AND NOTES.

- PLAN NOTES:**
- REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
 - EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXISTING CONDITIONS. LOCATIONS, SIZES AND LAYOUT GEOMETRY OF CRACKS, SPALLS, STEEL CORROSION AND OTHER DEFICIENCIES NOTED TO BE REPAIRED ARE SHOWN DIAGNOSTICALLY, ARE FOR SCOPE DEFINITION ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
 - INSTALL NEW TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOOR SURFACES INCLUDING STAIR TREADS AND STAIR LANDINGS. SEE DETAIL 4/5302 FOR ADDL. INFO. REFER TO ME.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS. REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5300 SERIES DRAWINGS FOR TYPICAL DETAILS. REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
 - REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"
 - REPLACE WHEEL STOPS ANCHORED TO SLABS
 - PRECAST SPANDREL BEAM END REPAIR
 - PRECAST SPANDREL BEAM CORNER REPAIR
 - REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
 - EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
 - INSTALL NEW TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOOR SURFACES INCLUDING STAIR TREADS AND STAIR LANDINGS. SEE DETAIL 4/5302 FOR ADDL. INFO. REFER TO ME.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS. REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5300 SERIES DRAWINGS FOR TYPICAL DETAILS. REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
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 - REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
 - EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
 - INSTALL NEW TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOOR SURFACES INCLUDING STAIR TREADS AND STAIR LANDINGS. SEE DETAIL 4/5302 FOR ADDL. INFO. REFER TO ME.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS. REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5300 SERIES DRAWINGS FOR TYPICAL DETAILS. REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
 - REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"
 - REPLACE WHEEL STOPS ANCHORED TO SLABS
 - PRECAST SPANDREL BEAM END REPAIR
 - PRECAST SPANDREL BEAM CORNER REPAIR

- BASE BID REPAIR #15 SLAB REPLACEMENT**
- SEE DETAIL 1/5303 FOR NEW SLAB THICKNESS AND REINFORCING. EXTENT OF REMOVAL & REPLACEMENT TO BE AN ENTIRE FILIGREE PANEL (SPAN DIRECTION LENGTH = BEAM TO BEAM, WIDTH = FILIGREE JOINT/EDGE TO FILIGREE JOINT/EDGE). EXISTING FILIGREE JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS.
- (SR) NOTES:**
- SEE REPAIR SCHEDULE AND DETAIL 1/5303 FOR SLAB REPLACEMENT SEQUENCE, PROCEDURES, QUANTITIES, DETAILS AND ADDITIONAL INFORMATION.
 - REMOVE & SALVAGE EXISTING CHAIN LINK FENCE MESH AND VEHICLE GUARDRAIL SYSTEM. EXISTING VERTICAL POSTS CONNECTED DIRECTLY TO EXISTING STEEL BEAMS TO REMAIN AND BE PROTECTED DURING SLAB DEMOLITION. RE-INSTALL AND CONNECT CHAIN LINK FENCE MESH AND VEHICLE GUARDRAIL SYSTEM "IN KIND, CONNECTIONS TO MATCH EXISTING" AFTER CASTING NEW FLOOR SLAB.
 - REMOVE SLAB FROM AROUND EXISTING LATERAL BRACE DIAGONALS AND CONNECTIONS. INSTALL NEW SLAB SUPPORT ANGLES UNDER NEW SLAB TO SUPPORT SLAB WHERE SLAB BEARING ON TOP OF BEAM IS IMPOSSIBLE DUE TO DIAGONALS. SEE DETAIL 6/5302.
 - AS PART OF REPAIR #15, CAST NEW RAISED ISLAND TOPPING SLAB & RAMP OVER NEW SLAB REPLACEMENT AREAS. LAYOUT, ELEVATION & SLOPE TO MATCH EXISTING. SEE CONCRETE TOPPING DETAIL 5/5302.
 - UNLESS OTHERWISE NOTED CUT SLAB AT FACE OF EXISTING WALLS.
 - SEE DETAIL 2/5302 FOR SLAB REINFORCING AT UTILITY PENETRATIONS.
 - REMOVE AND SALVAGE EXISTING LIGHT POLES FOR RE-USE. REMOVE EXISTING LIGHT POLE CONCRETE PIER DURING SLAB DEMOLITION. CAST NEW LIGHT POLE CONCRETE PIER PER DETAIL 1/5302 AND RE-INSTALL LIGHT POLE PER ELECTRICAL DRAWINGS.
 - GENERAL CONTRACTOR TO PERFORM A HIGH DEFINITION LIDAR LASER SURVEY OF THE TOP OF EXISTING FLOOR SLAB TO RECORD TOP OF EXISTING SLAB ELEVATIONS, HIGH POINTS, LOW POINTS AND SLOPE. GENERAL CONTRACTOR TO DETERMINE TOP OF SLAB ELEVATION, SLAB THICKNESS, HIGH POINT, LOW POINT AND SLOPE OF NEW SLAB SEGMENTS TO PREVENT PONDING WATER WITHIN NEW SLAB SEGMENTS AND PROVIDE MINIMUM 1/8" PER FOOT SLOPE TO DRAIN AND/OR TO EXISTING SLAB INTERFACES. TOP OF NEW SLAB ELEVATION TO BE FLUSH WITH AND MATCH TOP OF EXISTING SLAB ELEVATIONS AT EXISTING/NEW SLAB INTERFACES.

LEGEND

SEE REPAIR SCHEDULE FOR ADDL. GRAPHIC SYMBOLS

---	SLAB JOINT REPAIR, SEE PLAN NOTE #1
(E) WF	EXISTING STEEL BEAM
---	EXISTING FILIGREE PANEL JOINT
---	EXISTING CHAIN LINK FENCE OR VEHICLE GUARDRAIL. SEE NOTE SR-2.
---	EXISTING PAINTED TRAFFIC AND PARKING MARKINGS. CONTRACTOR TO PROVIDE ALL NEW PAINTED PARKING STRIPING AFTER INSTALLING NEW TRAFFIC COATINGS. SEE ARCH. DWGS. FOR ADDL. INFO.
SR-4	DENOTES SPECIFIC SLAB REPLACEMENT (SR) NOTES. REFER TO 'REPAIR #15 BASE BID SLAB REPLACEMENT (SR) NOTES' FOR ADDL. INFO.

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DiGroupArchitecture
 ARCHITECTURE FOR CHANGE
 15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
 2490 W. Hunting Park Ave., 8th Fl. • Philadelphia, PA 19122-1302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T 973.265.9775 F 973.265.9774
 NJ COA NO. GA28633300

Ross E. Stuart, PE
 NJ PE GE55129

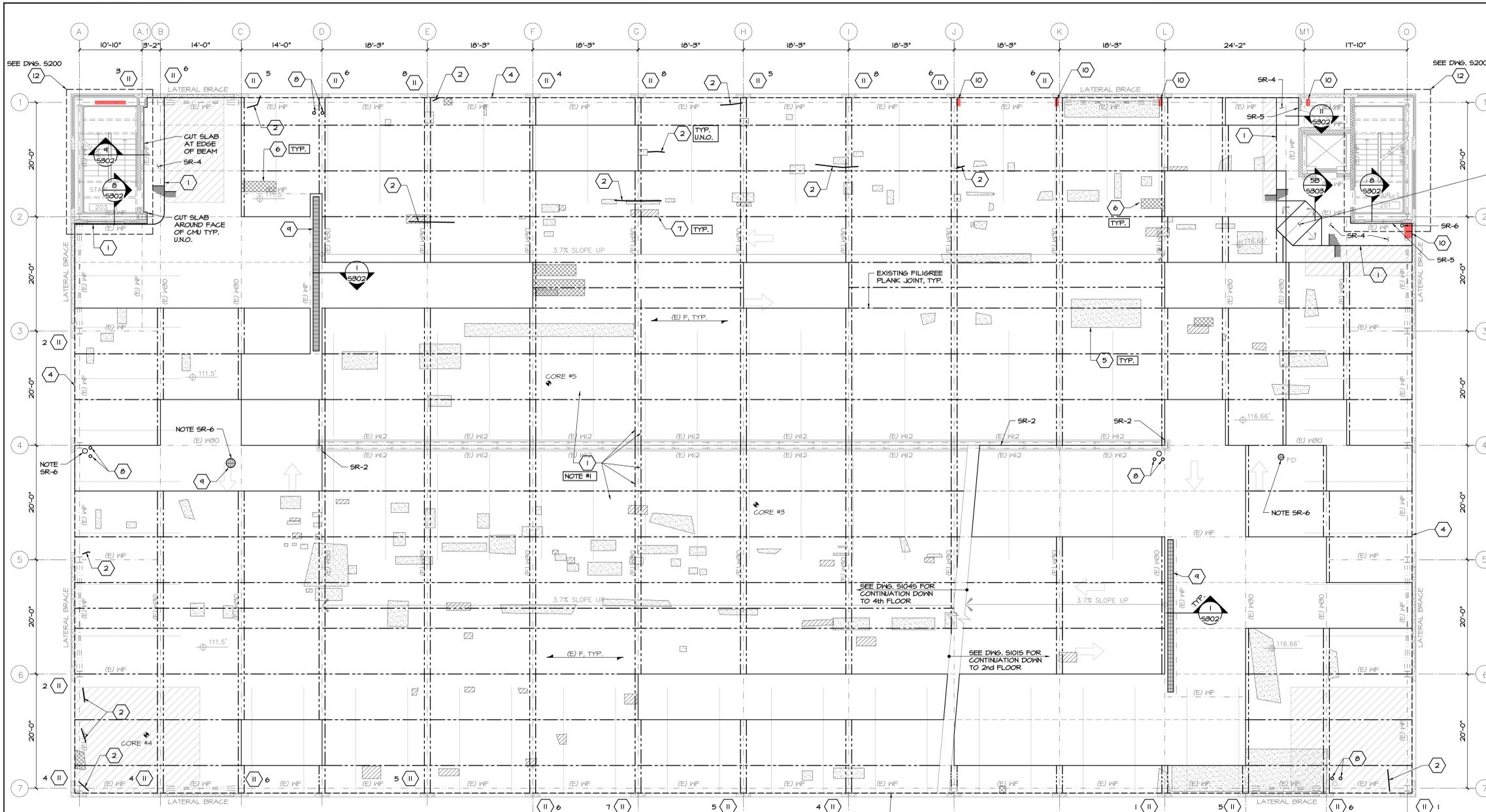
Client:
 UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabethtown, NJ 07207

Project:
 GERRY B. GREEN PLAZA
 PARKING GARAGE REPAIRS
 Block 246 / Lot 1
 200 West 2nd Street
 Plainfield, NJ 07063

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 Checked By: RES

Sheet Name:
SECOND FLOOR TOPSIDE PLAN

Sheet No:
S102T
 Sheet 21 of 58



IF BASE BID FLOOR SLAB REPLACEMENT IS SELECTED, SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE RAMP TOPPING IN ITS ENTIRETY.

REPAIR SCHEDULE		REPAIR SCHEDULE					
REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL	REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5301, 2/5301 & 3/5301	12	N/A	DEMOLISH AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL FRAMING, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.	SEE 5200 SERIES DRAWINGS AND DELEGATED DESIGN NOTES
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300	13	N/A	INSTALL TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS.	4/5302
3	~	CMU WALL CRACK REPAIR	7/5300	14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM TO UNDERSIDE OF ALL BASE BID FILIGREE SLABS.	SEE DRAWING 5304 AND NOTES ON DRAWING 5003
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.I.P. FOUNDATION WALL AT LINE 1)	4/5301	15	■	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER	1/5303 AND 6/5300
5	■	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300	16	N/A	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"	N/A
6	■	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	17	N/A	REPLACE WHEEL STOPS ANCHORED TO SLAB	N/A
7	■	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	18	N/A	PRECAST SPANDREL BEAM END REPAIR	3/5400
8	○	REMOVE AND REPLACE BOLLARDS	5/5400	19	N/A	PRECAST SPANDREL BEAM CORNER REPAIR	4/5400
9	■	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE FLUMING DWG.	DETAILS 1 THRU 3/5302				
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, FOURSTOPS, FLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301				
11	■	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAM/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301				

THIRD FLOOR TOPSIDE PLAN

SCALE: 1/8" = 1'-0"

- PLAN NOTES:**
- REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
 - EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXISTING CONDITIONS.
 - LOCATIONS, SIZES AND LAYOUT GEOMETRY OF CRACKS, SPALLS, STEEL CORROSION AND OTHER DEFICIENCIES NOTED TO BE REPAIRED ARE SHOWN DIAGNOSTICALLY, ARE FOR SCOPE DEFINITION ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
 - INSTALL NEW TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOOR SURFACES INCLUDING STAIR TREADS AND STAIR LANDINGS. SEE DETAIL 4/5302 FOR ADDL. INFO. REFER TO ME.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS.
 - REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5300 SERIES DRAWINGS FOR TYPICAL DETAILS.
 - REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
 - CONTRACTOR TO PROVIDE ALL NEW PAINTED PARKING STRIPING AFTER INSTALLING NEW TRAFFIC COATINGS. SEE ARCH. DWG'S. FOR ADDL. INFO.
 - COORDINATE TIMING AND PHASING OF THE WORK, TEMPORARY SAFETY BARRIERS/FENCING, CONTRACTOR MATERIAL STORAGE AREA, TEMPORARY SIGNAGE, USE RESTRICTIONS AND BUILDING CLOSURES WITH THE OWNER. SEE PHASING DRAWINGS, ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - GENERAL CONTRACTOR TO PERFORM A HIGH DEFINITION LIDAR LASER SURVEY OF THE TOP OF EXISTING FLOOR SLAB TO RECORD TOP OF EXISTING SLAB ELEVATIONS, HIGH POINTS, LOW POINTS AND SLOPE. GENERAL CONTRACTOR TO DETERMINE TOP OF SLAB ELEVATION, SLAB THICKNESS, HIGH POINT, LOW POINT AND SLOPE OF NEW SLAB SEGMENTS TO PREVENT PONDING WATER WITHIN NEW SLAB SEGMENTS AND PROVIDE MINIMUM 1/8" PER FOOT SLOPE TO DRAIN AND/OR TO EXISTING SLAB INTERFACES. TOP OF NEW SLAB ELEVATION TO BE FLUSH WITH AND MATCH TOP OF EXISTING SLAB ELEVATIONS AT EXISTING/NEW SLAB INTERFACES.

- LEGEND**
- SEE REPAIR SCHEDULE FOR ADDL. GRAPHIC SYMBOLS
- SLAB JOINT REPAIR, SEE PLAN NOTE #1
 - (E) WF --- EXISTING STEEL BEAM
 - EXISTING FILIGREE PANEL JOINT
 - EXISTING CHAIN LINK FENCE OR VEHICLE GUARDRAIL. SEE NOTE SR-2.
 - EXISTING PAINTED TRAFFIC AND PARKING MARKINGS. CONTRACTOR TO PROVIDE ALL NEW PAINTED PARKING STRIPING AFTER INSTALLING NEW TRAFFIC COATINGS. SEE ARCH. DWG'S. FOR ADDL. INFO.
 - SR-4 --- DENOTES SPECIFIC SLAB REPLACEMENT (SR) NOTE. REFER TO 'REPAIR #15 BASE BID SLAB REPLACEMENT' FOR ADDL. INFO.

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DiGroupArchitecture
 ARCHITECTURE FOR CHANGE
 15 Belfry Street • New Brunswick, NJ 08901 • T: 732.249.6242
 2490 W. Hunting Park Ave., 8th Fl. • Philadelphia, PA 19122-1302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28633300

Ross E. Stuart, PE
 NJ PE GE55129

DO NOT SCALE. DRAWING MAY BE PRINTED AT REDUCED SCALE. CONSULT WITH ARCHITECT FOR DIMENSIONS.

Client:
UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabethtown, NJ 07207

Project:
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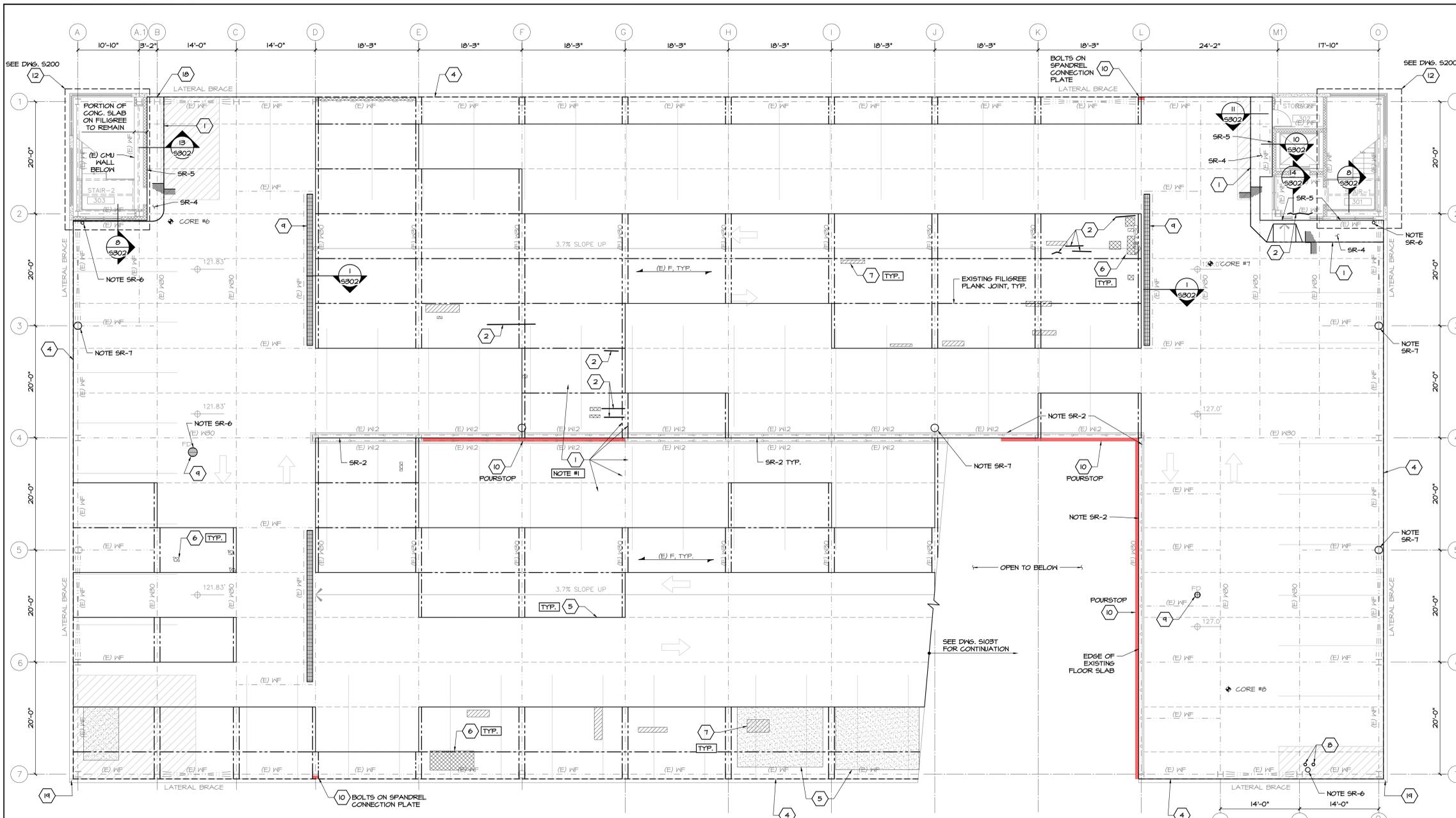
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Sheet Name:
THIRD FLOOR TOPSIDE PLAN

Sheet No:
S103T
 Sheet 23 of 58

SEE DRAWING 5001 FOR BASE BID QUANTITIES AND BIDDING REQUIREMENTS AND NOTES.

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REPAIR SCHEDULE						
REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL	REPAIR NUMBER	SYMBOL	REPAIR TYPE
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5300, 2/5300 & 3/5300	12	N/A	DEMOLISH AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL. FRAMING, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300	13	N/A	INSTALL TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS.
3	~	CMU WALL CRACK REPAIR	7/5300	14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM TO UNDERSIDE OF ALL BASE BID FILIGREE SLABS.
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.J.P. FOUNDATION WALL AT LINE I)	4/5300	15	■	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER.
5	■	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300	16	N/A	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"
6	■	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	17	N/A	REPLACE WHEEL STOPS ANCHORED TO SLAB
7	■	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	18	N/A	PRECAST SPANDREL BEAM END REPAIR
8	○	REMOVE AND REPLACE BOLLARDS	5/5400	19	N/A	PRECAST SPANDREL BEAM CORNER REPAIR
9	■	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE PLUMBING DWGS.	DETAILS 1 THRU 3/5302			
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, POURSTOPS, FLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301			
11	■	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAM/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301			

FOURTH FLOOR TOPSIDE PLAN

SCALE: 1/8" = 1'-0"

- PLAN NOTES:**
- REMOVE AND REPLACE ALL CONTROL, CONSTRUCTION AND ISOLATION JOINT SEALANTS THROUGHOUT THE TOPSIDE OF THE ENTIRE FLOOR SLAB INCLUDING SLAB TO WALL/CURB INTERFACES, TYPICAL. ALL TOOLED JOINTS IN TOP OF SLAB TO BE FILLED WITH NEW SEALANT.
 - EXISTING FLOOR SLAB CONTROL, CONSTRUCTION AND ISOLATION JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXISTING CONDITIONS.
 - LOCATIONS, SIZES AND LAYOUT GEOMETRY OF CRACKS, SPALLS, STEEL CORROSION AND OTHER DEFICIENCIES NOTED TO BE REPAIRED ARE SHOWN DIAGNOSTICALLY, ARE FOR SCOPE DEFINITION ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYING NOT ALL DEFICIENCIES ARE SHOWN.
 - INSTALL TRAFFIC COATINGS ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOOR SURFACES INCLUDING STAIR TREADS AND STAIR LANDINGS. SEE DETAIL 4/5302 FOR ADDL. INFO. REFER TO ME.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS.
 - REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5300 SERIES DRAWINGS FOR TYPICAL DETAILS.
 - REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL PROJECT SCOPE INCLUDING THE REMOVAL AND REPLACEMENT OF EXTERIOR FACADE AND PRECAST TO PRECAST SEALANTS AND CLEANING OF THE EXTERIOR FACADE.
 - CONTRACTOR TO PROVIDE ALL NEW PAINTED PARKING STRIPING AFTER INSTALLING NEW TRAFFIC COATINGS. SEE ARCH. DWGS. FOR ADDL. INFO.
 - COORDINATE TIMING AND PHASING OF THE WORK, TEMPORARY SAFETY BARRIERS/FENCING, CONTRACTOR MATERIAL STORAGE AREA, TEMPORARY SIGNAGE, USE RESTRICTIONS AND BUILDING CLOSURES WITH THE OWNER. SEE PHASING DRAWINGS, ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - DEMOTES SPAN OF EXISTING VARYING THICKNESS (4 1/2" TO 5 1/2") CAST IN PLACE REINFORCED CONCRETE TOPPING SLAB (TOP SURFACE SLOPED TO DRAIN OVER 2 1/4" THICK FILIGREE PRECAST PANELS).

- 15 BASE BID REPAIR #15 SLAB REPLACEMENT**
- SEE DETAIL 1/5303 FOR NEW SLAB THICKNESS AND REINFORCING. EXTENT OF REMOVAL & REPLACEMENT TO BE AN ENTIRE FILIGREE PANEL (SPAN DIRECTION LENGTH = BEAM TO BEAM, WIDTH = FILIGREE JOINT/EDGE TO FILIGREE JOINT/EDGE). EXISTING FILIGREE JOINT LOCATIONS AND LAYOUT ARE DIAGNOSTIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS.
- (SR) NOTES:**
- SEE REPAIR SCHEDULE AND DETAIL 1/5303 FOR SLAB REPLACEMENT SEQUENCE, PROCEDURES, QUANTITIES, DETAILS AND ADDITIONAL INFORMATION.
 - REMOVE & SALVAGE EXISTING CHAIN LINK FENCE MESH AND VEHICLE GUARDRAIL SYSTEM. EXISTING VERTICAL POSTS CONNECTED DIRECTLY TO EXISTING STEEL BEAMS TO REMAIN AND BE PROTECTED DURING SLAB DEMOLITION. RE-INSTALL AND CONNECT CHAIN LINK FENCE MESH AND VEHICLE GUARDRAIL SYSTEM "IN KIND, CONNECTIONS TO MATCH EXISTING" AFTER CASTING NEW FLOOR SLAB.
 - REMOVE SLAB FROM AROUND EXISTING LATERAL BRACE DIAGONALS AND CONNECTIONS. INSTALL NEW SLAB SUPPORT ANGLES UNDER NEW SLAB TO SUPPORT SLAB WHERE SLAB BEARING ON TOP OF BEAM IS IMPOSSIBLE DUE TO DIAGONALS. SEE DETAIL 6/5302.
 - AS PART OF REPAIR #15, CAST NEW RAISED ISLAND TOPPING SLAB & RAMP OVER NEW SLAB REPLACEMENT AREAS. LAYOUT, ELEVATION & SLOPE TO MATCH EXISTING. SEE CONCRETE TOPPING DETAIL 5/5302.
 - UNLESS OTHERWISE NOTED CUT SLAB AT FACE OF EXISTING WALLS.
 - SEE DETAIL 2/5302 FOR SLAB REINFORCING AT UTILITY PENETRATIONS.
 - REMOVE AND SALVAGE EXISTING LIGHT POLES FOR RE-USE. REMOVE EXISTING LIGHT POLE CONCRETE PIER DURING SLAB DEMOLITION. CAST NEW LIGHT POLE CONCRETE PIER PER DETAIL 1/5302 AND RE-INSTALL LIGHT POLE PER ELECTRICAL DRAWINGS.
 - GENERAL CONTRACTOR TO PERFORM A HIGH DEFINITION LIDAR LASER SURVEY OF THE TOP OF EXISTING FLOOR SLAB TO RECORD TOP OF EXISTING SLAB ELEVATIONS, HIGH POINTS, LOW POINTS AND SLOPE. GENERAL CONTRACTOR TO DETERMINE TOP OF SLAB ELEVATION, SLAB THICKNESS, HIGH POINT, LOW POINT AND SLOPE OF NEW SLAB SEGMENTS TO PREVENT PONDING WATER WITHIN NEW SLAB SEGMENTS AND PROVIDE MINIMUM 1/8" PER FOOT SLOPE TO DRAIN AND/OR TO EXISTING SLAB INTERFACES. TOP OF NEW SLAB ELEVATION TO BE FLUSH WITH AND MATCH TOP OF EXISTING SLAB ELEVATIONS AT EXISTING/NEW SLAB INTERFACES.

LEGEND

SEE REPAIR SCHEDULE FOR ADDL. GRAPHIC SYMBOLS

- SLAB JOINT REPAIR, SEE PLAN NOTE #1
- (E) WF --- EXISTING STEEL BEAM
- EXISTING FILIGREE PANEL JOINT
- EXISTING CHAIN LINK FENCE OR VEHICLE GUARDRAIL. SEE NOTE SR-2.
- EXISTING PAINTED TRAFFIC AND PARKING MARKINGS. CONTRACTOR TO PROVIDE ALL NEW PAINTED PARKING STRIPING AFTER INSTALLING NEW TRAFFIC COATINGS. SEE ARCH. DWGS. FOR ADDL. INFO.
- SR-4 --- DEMOTES SPECIFIC SLAB REPLACEMENT (SR) NOTE. REFER TO REPAIR #15 BASE BID SLAB REPLACEMENT (SR) NOTES FOR ADDL. INFO.

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DiGroupArchitecture
 ARCHITECTURE FOR CHANGE
 15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
 2495 W. Hunting Park Ave., Bldg. 9 • Philadelphia, PA 19126-1302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T 973.265.9775 F 973.265.9774
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Ross E. Stuart, PE
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 UNION COUNTY
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 10 Elizabethtown Plaza - 5th Floor
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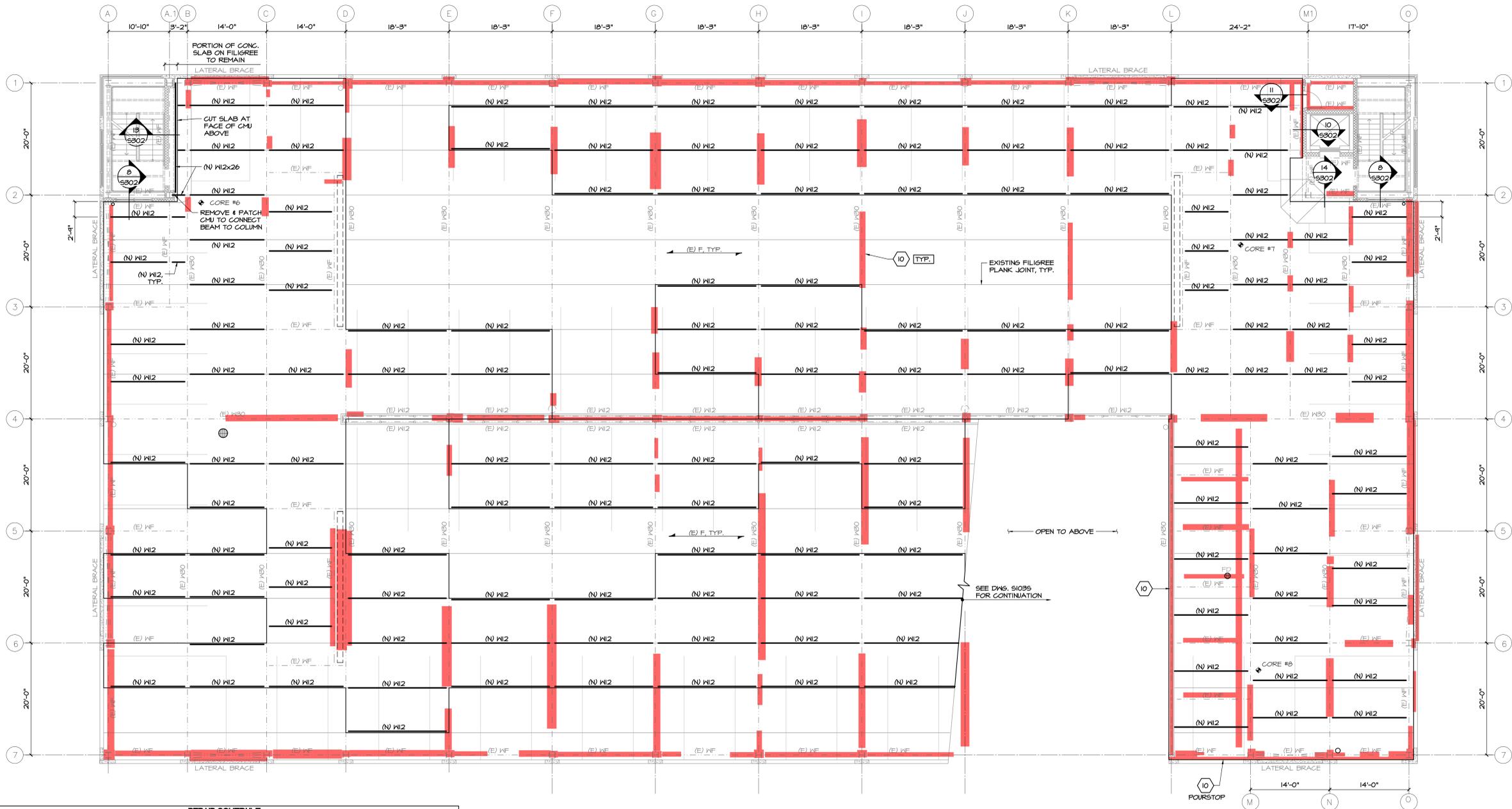
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Sheet Name:
FOURTH FLOOR TOPSIDE PLAN

Sheet No:
S104T
 Sheet 25 of 58

U:\ACCOUNTS\JERRY B GREEN PLAZA PARKING STRUCTURE\DESIGNS\

SEE DRAWING 5001 FOR BASE BID QUANTITIES AND BIDDING REQUIREMENTS AND NOTES.



REPAIR SCHEDULE							
REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL	REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5301, 2/5301 & 3/5301			DEMOLISH AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL FRAMING. CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.	SEE 5200 SERIES DRAWINGS AND DELEGATED DESIGN NOTES
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300	12	N/A		
3	~	CMU WALL CRACK REPAIR	7/5300				
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.I.P. FOUNDATION WALL AT LINE I)	4/5301	13	N/A	INSTALL TRAFFIC COATING ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS.	4/5302
5	■	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300	14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM TO UNDERSIDE OF ALL BASE BID FILIGREE SLABS	SEE DRAWING 5304 AND NOTES ON DRAWING 5003
6	■	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	15	■	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER	1/5303 AND 6/5300
7	■	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300	16	N/A	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"	N/A
8	○	REMOVE AND REPLACE BOLLARDS	5/5400	17		REPLACE WHEEL STOPS ANCHORED TO SLAB	N/A
9	■	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE FLUMING DWGS.	DETAILS 1 THRU 3/5302	18	N/A	PRECAST SPANDREL BEAM END REPAIR	3/5400
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, POURSTOPS, FLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301	19	N/A	PRECAST SPANDREL BEAM CORNER REPAIR	4/5400
11	■	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAMS/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301				
12	■	N/A					
13	■	ANCHOR ROD QUANTITY					

SEE DRAWING 5001 FOR BASE BID QUANTITIES AND BIDDING REQUIREMENTS AND NOTES.

FOURTH FLOOR SOFFIT PLAN

SCALE: 1/8" = 1'-0"



PLAN NOTES:

- LOCATIONS, SIZES AND LAYOUT GEOMETRY OF CRACKS, SPALLS, STEEL CORROSION AND OTHER DEFICIENCIES NOTED TO BE REPAIRED ARE SHOWN DIAGRAMMATICALLY, ARE FOR SCOPE DEFINITION ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS OR QUANTITIES. DUE TO CAR OCCUPANCY OBSTRUCTIONS DURING FIELD SURVEYS NOT ALL DEFICIENCIES ARE SHOWN.
- REFER TO M.E.P. DRAWINGS FOR MECHANICAL, ELECTRICAL AND PLUMBING REPAIRS.
- REFER TO DRAWINGS 5001 THRU 5003 FOR STRUCTURAL NOTES. REFER TO 5000 SERIES DRAWINGS FOR TYPICAL DETAILS.
- COORDINATE TIMING AND PHASING OF THE WORK, TEMPORARY SAFETY BARRIERS/FENCING, CONTRACTOR MATERIAL STORAGE AREA, TEMPORARY SIGNAGE, USE RESTRICTIONS AND BUILDING CLOSURES WITH THE OWNER. SEE PHASING DRAWING PH01, ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- REMOVE & REPLACE VARYING THICKNESS (APPROX. 4") C.I.P. CONCRETE FLOOR SLAB SLOPED TO DRAIN OVER 3/4" THICK FILIGREE PRECAST PANELS.

- 15 BASE BID REPAIR #15 SLAB REPLACEMENT (SR) NOTES:**
- SEE DETAIL 1/5303 FOR THICKNESS AND REINFORCING. EXTENT OF REMOVAL & REPLACEMENT TO BE AN ENTIRE FILIGREE PANEL (SPAN DIRECTION LENGTH = BEAM TO BEAM WIDTH = FILIGREE JOINT/EDGE TO FILIGREE JOINT/EDGE). EXISTING FILIGREE JOINT LOCATIONS AND LAYOUT ARE DIAGRAMMATIC IN NATURE, ARE FOR REFERENCE ONLY AND ARE NOT TO BE CONSIDERED AN AS BUILT RECORD OF EXACT EXISTING CONDITIONS.
 - TEMPORARILY SUPPORT IN PLACE OR REMOVE, SALVAGE AND RE-INSTALL EXISTING M.E.P. CONDUITS, PIPES, LIGHTS, ETC. THAT ARE SUSPENDED FROM THE FLOOR SLAB SOFFIT. COORDINATE WITH M.E.P. DRAWINGS. SEE DETAIL 1/5303 FOR SUSPENDED M.E.P. POINT LOADS FROM FLOOR SLAB SOFFIT.

LEGEND
SEE REPAIR SCHEDULE FOR ADDL. GRAPHIC SYMBOLS

(E) WF	EXISTING STEEL BEAM
(E) WF	EXISTING FILIGREE PANEL JOINT
○	EXISTING CHAIN LINK FENCE OR VEHICLE GUARDRAIL
(N) W12	DEMOTES NEW STEEL BEAM, SEE DETAIL 1/5303 FOR SIZE

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DiGroupArchitecture
 ARCHITECTURE FOR CHANGE
 15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
 2450 W. Hunting Park Ave., Bldg. 9 • Philadelphia, PA 19126-1302 • T: 215.634.3400

Pennoni ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28633300

Ross E. Stuart, PE
 NJ PE GE55129

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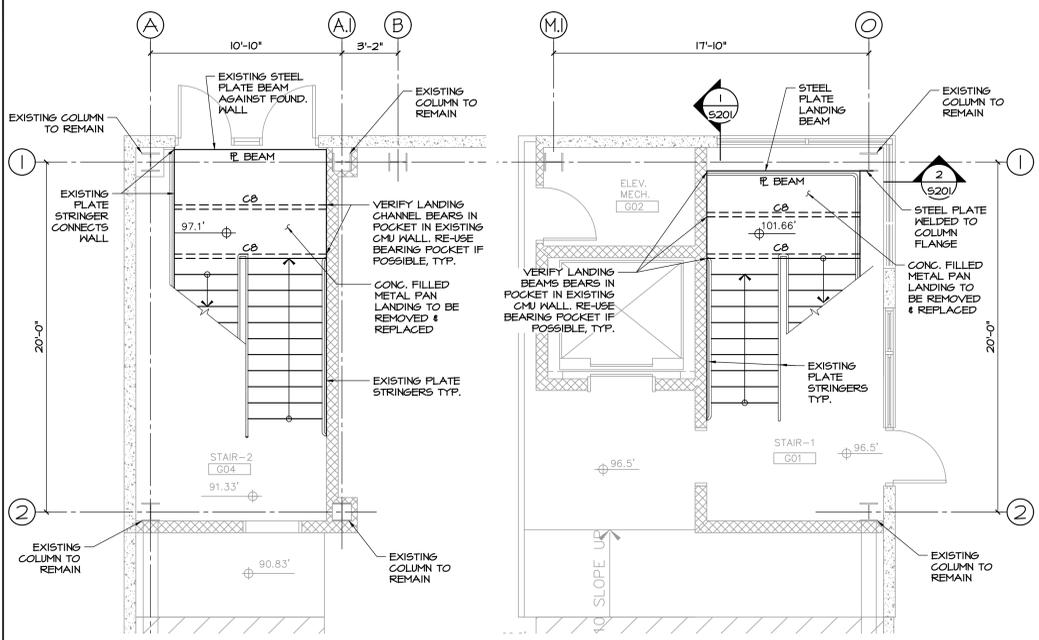
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 UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabethtown, NJ 07207

Project:
 GERRY B. GREEN PLAZA
 PARKING GARAGE REPAIRS
 Block 246 / Lot 1
 200 West 2nd Street
 Plainfield, NJ 07063

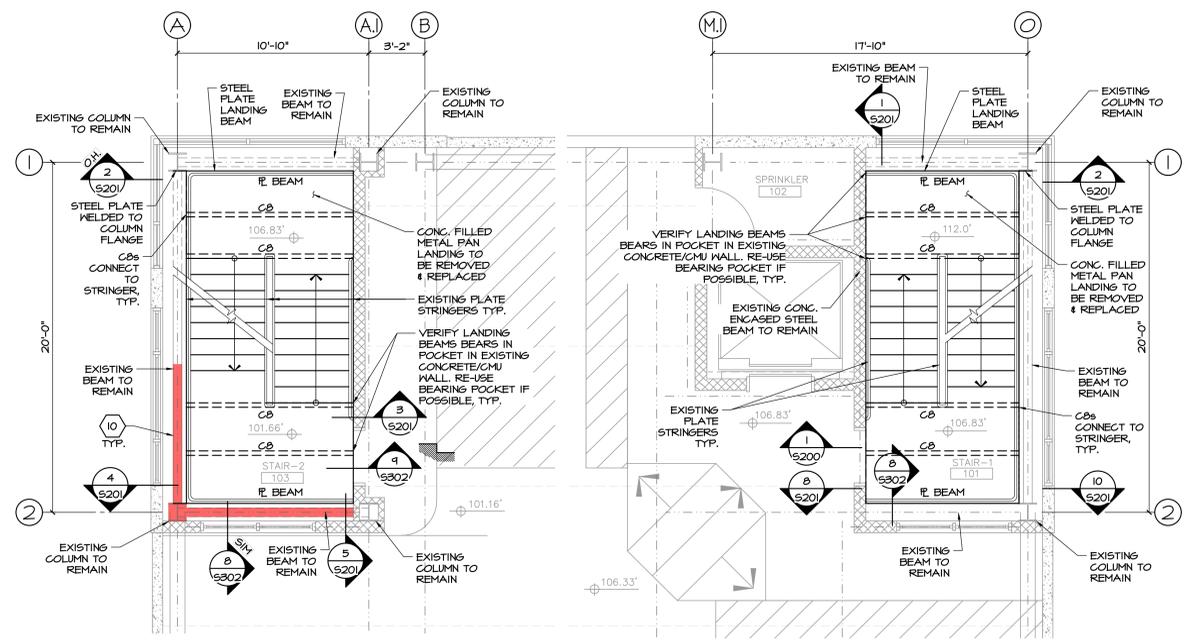
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 Date: 11/03/25
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FOURTH FLOOR SOFFIT PLAN

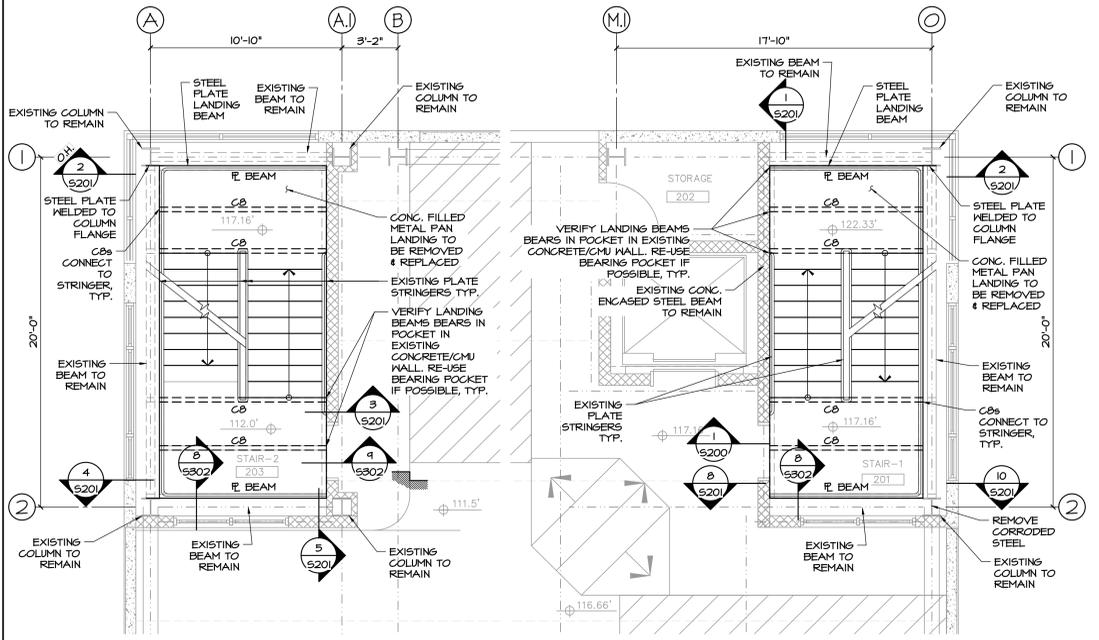
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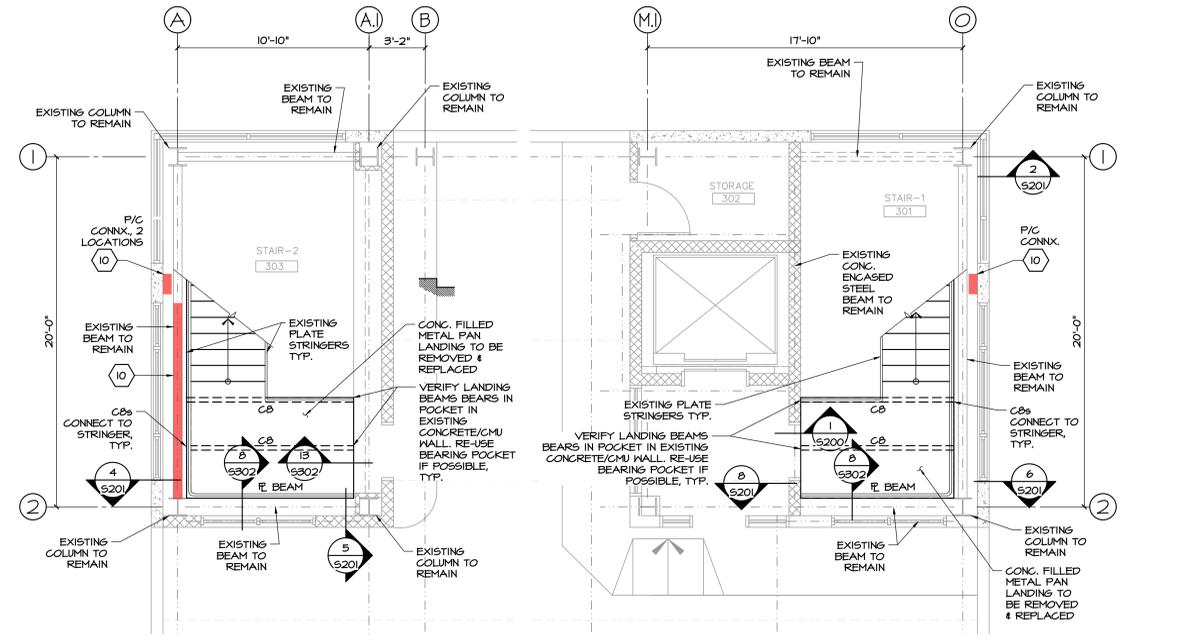
GROUND FLOOR TOPSIDE PLAN
SCALE: 1/4" = 1'-0"



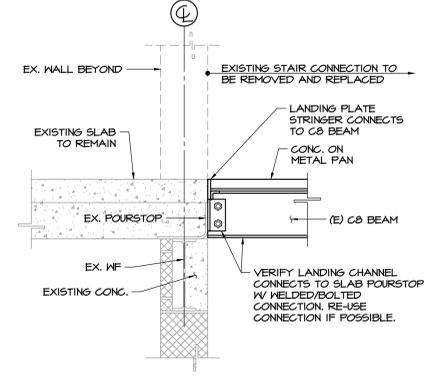
SECOND FLOOR TOPSIDE PLAN
SCALE: 1/4" = 1'-0"



THIRD FLOOR TOPSIDE PLAN
SCALE: 1/4" = 1'-0"



FOURTH FLOOR TOPSIDE PLAN
SCALE: 1/4" = 1'-0"



1 STAIR SECTION AT DOOR
SCALE: 1" = 1'-0"

REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
10	[Red Square]	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, POURSTOPS, PLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301
18	[Blue Square]	INSTALL TRAFFIC COATING ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS	4/5302

- PLAN NOTES:**
- ALL EXISTING WF BEAMS AND COLUMNS TO REMAIN.
- REPAIR #12 STAIR FRAMING REPLACEMENT REQUIREMENTS:**
- REMOVE AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL FRAMING.
 - STAIR REPLACEMENT DESIGN AND DETAILING IS A DELEGATED DESIGN AND IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. SEE DELEGATED DESIGN NOTES ON DRAWING 5001 FOR ADDITIONAL INFORMATION.
 - FRAMING LAYOUT, LOAD PATH, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS AND GEOMETRY.
 - GENERAL CONTRACTOR TO FIELD SURVEY ALL DIMENSIONS, CLEARANCES, EXISTING STRUCTURAL MEMBERS, ELEVATIONS, HEIGHTS, ETC. PRIOR TO DEMOLITION.
 - TOP OF LANDINGS ELEVATIONS TO MATCH TOP OF EXISTING FLOOR ELEVATIONS.
 - TREAD WIDTH AND RISER HEIGHT TO MATCH EXISTING MEASUREMENTS.

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DiGroupArchitecture
ARCHITECTURE FOR CHANGE
15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
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SUITE 2102
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NJ PE 0E55120

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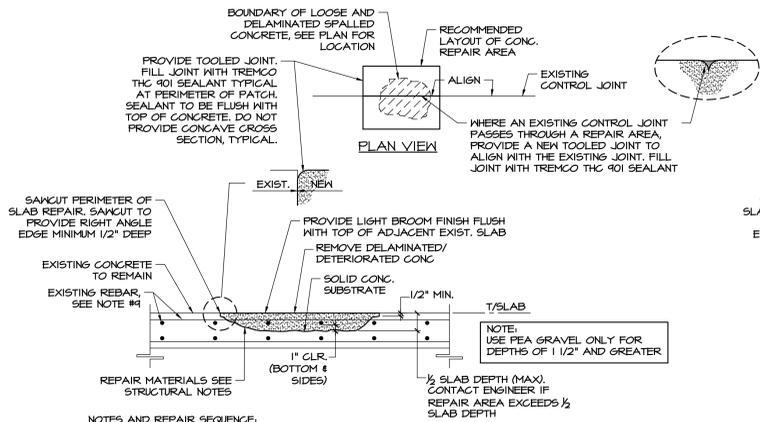
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STAIR PLANS, SECTIONS AND DETAILS

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S200
Sheet 27 of 58

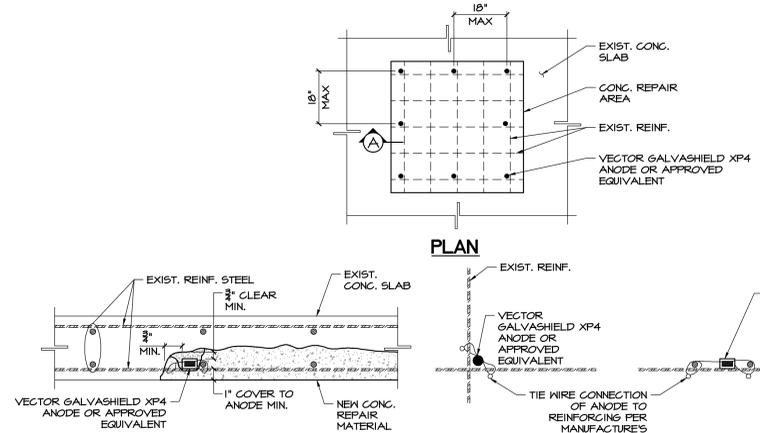


NOTES AND REPAIR SEQUENCE.

- REFER TO PLANS AND DETAIL 4/5300 FOR REPAIR LAYOUT AND EXTENT OF SLAB REPAIRS. FINAL EXTENT AND LAYOUT OF REPAIR TO BE VERIFIED IN FIELD BY THE ENGINEER PRIOR TO WORK STARTING.
- CONTRACTOR TO PROVIDE TEMPORARY SHORING FOR THE CONCRETE SLAB AS REQUIRED FOR SELECTIVE CONCRETE DEMOLITION AND REPAIR. CONCRETE TO BE SHORED PRIOR TO ANY SAWCUTTING OR DEMO.
- FIELD LOCATE AND PROTECT EXISTING UTILITIES & REINFORCING STEEL PRIOR TO REMOVAL OF DELAMINATED/DETERIORATED CONCRETE. DO NOT CUT OR DAMAGE EXISTING REINFORCING OR UTILITIES.
- SAWCUT PERIMETER OF EXISTING THRESHOLD PATCH. MAINTAIN RIGHT ANGLE OF CUT TO CONCRETE SURFACE. SAWCUT 1/2" MINIMUM TO AVOID CUTTING REINFORCING STEEL. MAINTAIN A MINIMUM REPAIR DEPTH OF 3/4" AT THE PERIMETER OF THE REPAIR. DO NOT FEATHER EDGE OF REPAIRS.
- REMOVE ALL LOOSE OR DELAMINATED CONCRETE. CHIP CONCRETE BACK TO SOUND CONCRETE SUBSTRATE. ROUGHEN SURFACE OF EXPOSED CONCRETE TO AMPLITUDE OF APPROXIMATELY 1/8".
- WHERE EXISTING REINFORCING STEEL IS EXPOSED WITHIN DETERIORATED CONCRETE REPAIR AREA, EXTEND REPAIR AREA TO PROVIDE 1" CLEAR BETWEEN REINFORCING AND PARALLEL SURFACE OF CONCRETE REPAIR AREA.
- CLEAN EXISTING STEEL REINFORCING TO REMOVE ALL LOOSE RUST AND SCALE USING WIRE BRUSH OR POWER TOOLS. SEE DETAIL 5/5300.
- CLEAN CONCRETE SURFACE. REMOVE ALL DELETERIOUS MATERIAL SUCH AS LAITANCE, DUST, DIRT, AND OIL.
- AFTER REMOVAL AND CLEANING OF THE CONCRETE SURFACE, CONTACT THE ENGINEER FOR REVIEW OF THE CONCRETE SUBSTRATE.
- INSPECT EXISTING REINFORCING STEEL TO VERIFY THAT 75% OR MORE OF ORIGINAL CROSS SECTION REMAINS INTACT. EXISTING STEEL DETERIORATED GREATER THAN 25% TO BE REMOVED AND REPLACED OR SUPPLEMENTAL STEEL ADDED AT THE DIRECTION OF THE ENGINEER BASED ON THE DETERIORATION OF THE EXISTING REINFORCING. ALL SUPPLEMENTAL STEEL OR EXISTING STEEL THAT IS LOOSE SHALL BE SECURED IN PLACE BY WIRE TIES OR OTHER APPROVED METHODS. SEE DETAIL 6/5300.
- AT SUBSURFACE DELAMINATION AND SPALL REPAIRS, INSTALL GALVANIC ANODES PER DETAIL 6/5300. SURFACE EROSION REPAIRS THAT DO NOT EXPOSE EXISTING REINFORCING DO NOT NEED GALVANIC ANODES.
- PREPARE THE CONCRETE SUBSTRATE AS REQUIRED. REFER TO THE LATEX MODIFIED GROUT MANUFACTURER'S RECOMMENDATIONS FOR ADDITIONAL INFORMATION. APPLY THE ANTI-CORROSION COATING TO THE STEEL REINFORCING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANTI-CORROSION COATING TO BE CONPROCO ECB OR APPROVED EQUAL.
- APPLY THE LATEX MODIFIED GROUT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CURE REPAIR MORTAR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND PROJECT SPECIFICATIONS. SHORING CAN BE REMOVED AFTER REPAIR MATERIAL HAS REACHED 75% OF SPECIFIED 28 DAY DESIGN STRENGTH.
- PROVIDE TOOLED JOINT AND SEALANT AT PERIMETER OF ALL SLAB REPAIRS AND AT C.J. LOCATIONS SHOWN ON THE PLANS. FILL JOINT WITH TREMCO VULKEM 4555L SEALANT TYPICAL AT PERIMETER OF PATCH AND AT INTERIOR CONTROL JOINTS AS DIRECTED BY THE ENGINEER.
- INSTALL WATERPROOFING SYSTEM AS INDICATED ON WATERPROOFING DRAWINGS.

1 TYPICAL DETAIL PARTIAL DEPTH TOPSIDE CONCRETE SLAB REPAIR

SCALE: N.T.S. THIS DETAIL APPLIES TO TOPSIDE CONCRETE SUBSURFACE DELAMINATION AND SPALL REPAIRS.

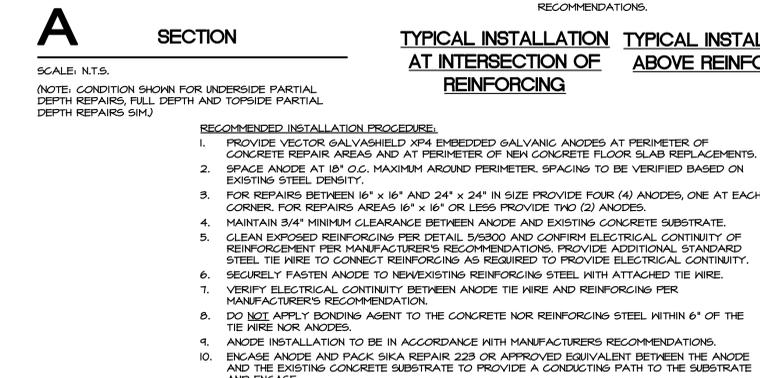


NOTES AND REPAIR SEQUENCE.

- REFER TO PLANS AND DETAIL 4/5300 FOR REPAIR LAYOUT AND EXTENT OF SLAB REPAIRS. FINAL EXTENT AND LAYOUT OF REPAIR TO BE VERIFIED IN FIELD BY THE ENGINEER PRIOR TO WORK STARTING.
- CONTRACTOR TO PROVIDE TEMPORARY SHORING FOR THE CONCRETE SLAB AS REQUIRED FOR SELECTIVE CONCRETE DEMOLITION AND REPAIR. CONCRETE TO BE SHORED PRIOR TO ANY SAWCUTTING OR DEMO.
- FIELD LOCATE AND PROTECT EXISTING UTILITIES & REINFORCING STEEL PRIOR TO REMOVAL OF DELAMINATED/DETERIORATED CONCRETE. DO NOT CUT OR DAMAGE EXISTING REINFORCING OR UTILITIES.
- SAWCUT PERIMETER OF EXISTING THRESHOLD PATCH. MAINTAIN RIGHT ANGLE OF CUT TO CONCRETE SURFACE. SAWCUT 1/2" MINIMUM TO AVOID CUTTING REINFORCING STEEL. MAINTAIN A MINIMUM REPAIR DEPTH OF 3/4" AT THE PERIMETER OF THE REPAIR. DO NOT FEATHER EDGE OF REPAIRS.
- REMOVE ALL LOOSE OR DELAMINATED CONCRETE. CHIP CONCRETE BACK TO SOUND CONCRETE SUBSTRATE. ROUGHEN SURFACE OF EXPOSED CONCRETE TO AMPLITUDE OF APPROXIMATELY 1/8".
- CLEAN CONCRETE SURFACE. REMOVE ALL DELETERIOUS MATERIAL SUCH AS LAITANCE, DUST, DIRT, AND OIL.
- PREPARE THE CONCRETE SUBSTRATE AS REQUIRED. REFER TO NON-SHRINK GROUT MANUFACTURER'S RECOMMENDATIONS FOR ADDITIONAL INFORMATION.
- APPLY NON-SHRINK GROUT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PROJECT SPECIFICATIONS.
- PROVIDE TOOLED JOINT AND SEALANT AT PERIMETER OF ALL SLAB REPAIRS AND AT C.J. LOCATIONS SHOWN ON THE PLANS. FILL JOINT WITH TREMCO VULKEM 4555L SEALANT TYPICAL AT PERIMETER OF PATCH AND AT INTERIOR CONTROL JOINTS AS DIRECTED BY THE ENGINEER.
- INSTALL WATERPROOFING SYSTEM AS INDICATED ON WATERPROOFING DRAWINGS.

2 TYPICAL DETAIL TOPSIDE CONCRETE SURFACE EROSION REPAIR

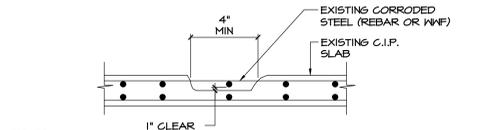
SCALE: N.T.S.



- NOTES.**
- REPAIR LAYOUT CONFIGURATION SHALL BE SIMPLIFIED AS MUCH AS POSSIBLE. MAINTAIN SQUARE CORNERS OF REPAIR AREA.
 - REFER TO PLANS FOR APPROXIMATE LOCATION AND SIZE OF DELAMINATED OR SPALLED CONCRETE. ACTUAL EXTENT OF DETERIORATED CONCRETE TO BE VERIFIED IN FIELD.
 - AT EDGE CONDITIONS, PROVIDE RIGHT ANGLE CUTS TO THE CONCRETE SURFACE. SAWCUT 1/2" MINIMUM AS REQUIRED TO AVOID CUTTING REINFORCING STEEL.
 - WHERE EXISTING REINFORCING STEEL IS EXPOSED WITHIN DETERIORATED CONCRETE REPAIR AREA EXTEND REPAIR AREA TO PROVIDE 2" CLEAR BETWEEN REINFORCING AND PARALLEL EDGE OF CONCRETE REPAIR AREA.
 - FIELD LOCATE AND PROTECT EXISTING REINFORCING STEEL PRIOR TO REMOVAL OF DELAMINATED/DETERIORATED CONCRETE. DO NOT CUT OR DAMAGE EXISTING REINFORCING.

3 TOPSIDE SLAB CRACK REPAIR DETAIL

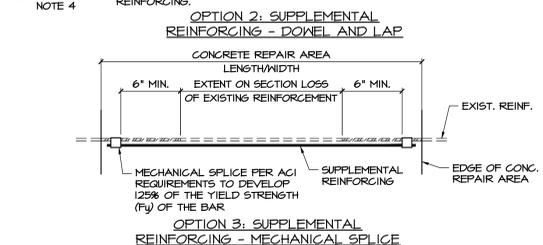
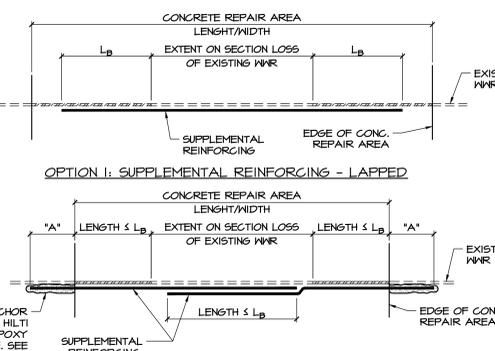
SCALE: N.T.S.



- NOTES.**
- SEE DETAIL 6/5300 IF REINFORCING REPAIR IS REQUIRED.
 - REMOVE CONCRETE ON CORRODED STEEL - UNTIL AT LEAST 4" OF CLEAN STEEL IS EXPOSED. WIRE BRUSH EXPOSED STEEL.
 - APPLY CONPROCO ECB OR APPROVED EQUAL COMPLETELY AROUND REINFORCING (INCLUDING UNDERSIDES) PER MFR. RECOMMENDATIONS.
 - FOLLOW MANUFACTURER'S WRITTEN RECOMMENDATIONS AND PRODUCT SPECIFICATIONS.
 - DO NOT CUT OR DAMAGE EXISTING SLAB REINFORCING OR UTILITIES DURING REPAIRS.

4 TYPICAL DETAIL CONCRETE REPAIR LAYOUT

SCALE: N.T.S.



A SECTION

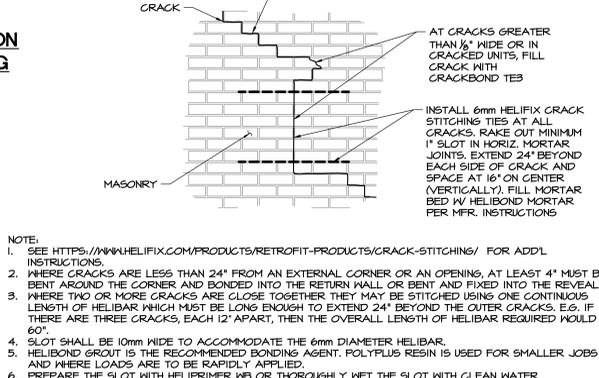
SCALE: N.T.S. (NOTE: CONDITION SHOWN FOR UNDERSIDE PARTIAL DEPTH REPAIRS, FULL DEPTH AND TOPSIDE PARTIAL DEPTH REPAIRS SHOWN)

RECOMMENDED INSTALLATION PROCEDURE.

- PROVIDE VECTOR GALVASHIELD XP4 EMBEDDED GALVANIC ANODES AT PERIMETER OF CONCRETE REPAIR AREAS AND AT PERIMETER OF NEW CONCRETE FLOOR SLAB REPLACEMENTS.
- SPACE ANODE AT 18" O.C. MAXIMUM AROUND PERIMETER. SPACING TO BE VERIFIED BASED ON EXISTING STEEL DENSITY.
- FOR REPAIRS BETWEEN 16" x 16" AND 24" x 24" IN SIZE PROVIDE FOUR (4) ANODES, ONE AT EACH CORNER. FOR REPAIRS AREAS 16" x 16" OR LESS PROVIDE TWO (2) ANODES.
- MAINTAIN 3/4" MINIMUM CLEARANCE BETWEEN ANODE AND EXISTING CONCRETE SUBSTRATE.
- CLEAN EXPOSED REINFORCING PER DETAIL 5/5300 AND CONFIRM ELECTRICAL CONTINUITY OF REINFORCING PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ADDITIONAL STANDARD STEEL TIE WIRE TO CONNECT REINFORCING AS REQUIRED TO PROVIDE ELECTRICAL CONTINUITY.
- SECURELY FASTEN ANODE TO NEW EXISTING REINFORCING STEEL WITH ATTACHED TIE WIRE.
- VERIFY ELECTRICAL CONTINUITY BETWEEN ANODE TIE WIRE AND REINFORCING PER MANUFACTURER'S RECOMMENDATION.
- DO NOT APPLY BONDING AGENT TO THE CONCRETE NOR REINFORCING STEEL WITHIN 6" OF THE TIE WIRE NOR ANODES.
- ANODE INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ENCASE ANODE AND PACK SIKA REPAIR 228 OR APPROVED EQUIVALENT BETWEEN THE ANODE AND THE EXISTING CONCRETE SUBSTRATE TO PROVIDE A CONDUCTING PATH TO THE SUBSTRATE AND ENCASE.

6 TYPICAL DETAIL EMBEDDED GALVANIC ANODE

SCALE: N.T.S.



- NOTE.**
- SEE [HTTPS://WWW.HELI-FIX.COM/PRODUCTS/RETROFIT-PRODUCTS/CRACK-STITCHING/](https://www.helifix.com/products/retrofit-products/crack-stitching/) FOR ADD'L INSTRUCTIONS.
 - WHERE CRACKS ARE LESS THAN 24" FROM AN EXTERNAL CORNER OR AN OPENING, AT LEAST 4" MUST BE BENT AROUND THE CORNER AND BONDED INTO THE RETURN WALL OR BENT AND FIXED INTO THE RETURN.
 - WHERE TWO OR MORE CRACKS ARE CLOSE TOGETHER THEY MAY BE STITCHED USING ONE CONTINUOUS LENGTH OF HELIBAR WHICH MUST BE LONG ENOUGH TO EXTEND 24" BEYOND THE OUTER CRACKS. E.G. IF THERE ARE THREE CRACKS, EACH 12" APART, THEN THE OVERALL LENGTH OF HELIBAR REQUIRED WOULD BE 60".
 - SLOT SHALL BE 10mm WIDE TO ACCOMMODATE THE 6mm DIAMETER HELIBAR.
 - HELBOND GROUT IS THE RECOMMENDED BONDING AGENT. POLYPLUS RESIN IS USED FOR SMALLER JOBS AND WHERE LOADS ARE TO BE RAPIDLY APPLIED.
 - PREPARE THE SLOT WITH HELIFRIMER JB OR THOROUGHLY WET THE SLOT WITH CLEAN WATER.

7 CMU WALL CRACK REPAIR

SCALE: N.T.S.

- NOTES.**
- SUPPLEMENTAL STEEL TO BE PROVIDED AT LOCATIONS WHERE LESS THAN 75% OF EXISTING REINFORCING STEEL CROSS SECTION REMAINS. SPLICE SAME SIZE BAR IN PLACE PER OPTIONS SHOWN ABOVE.
 - NEW SUPPLEMENTAL STEEL TO BE LAPPED / DEVELOPED TO EXISTING REINFORCING BEYOND EXTENT OF SECTION LOSS.
 - "L_s" INDICATES CLASS "B" TENSION LAP SPLICE PER ACI 318. REFER TO TENSION LAP SPLICE AND TENSION DEVELOPMENT LENGTH SCHEDULE IN THE GENERAL NOTES* FOR ADDITIONAL INFORMATION.
 - ANCHOR DOWEL WITH HILTI HY 200 ADHESIVE TO DEVELOP YIELD STRENGTH OF SUPPLEMENTAL REINFORCING.
 - "A*" DENOTES DOWEL EMBEDMENT LENGTH TO DEVELOP YIELD STRENGTH OF BAR PER MANUFACTURER'S RECOMMENDATIONS.
- | BAR SIZE | LENGTH "A" |
|----------|------------|
| #3 | 3 3/8" |
| #4 | 4 1/2" |
| #5 | 5 5/8" |
| #6 | 6 3/4" |
| #7 | 7 1/8" |
| #8 | 9" |
| #9 | 10 1/8" |
- MAINTAIN BAR SPACING AND CLEARANCE, ETC. PER ACI REQUIREMENTS.
 - APPLY SIKA ARMA-TAC 110 EPOXY OR APPROVED EQUAL COMPLETELY AROUND REINFORCING (INCLUDING UNDERSIDE) 20 MILS THICK, COVERING ALL EXPOSED STEEL. CURE TO TACK-FREE 2-3 HOURS. APPLY 2ND COAT AT 20 MILS AND ALLOW TO DRY AGAIN BEFORE APPLYING REPAIR MORTAR.
 - FOLLOW MANUFACTURER'S WRITTEN RECOMMENDATION AND PRODUCT SPECIFICATIONS.
 - DO NOT CUT OR DAMAGE EXISTING SLAB REINFORCING DURING REPAIRS.
 - OPTIONS FOR SUPPLEMENTAL STEEL ARE PROVIDED FOR CONTRACTOR SELECTION BASED ON FIELD CONDITIONS AND CONTRACTOR'S PREFERENCE.

8 TYPICAL DETAIL SUPPLEMENTAL REINFORCING STEEL

SCALE: N.T.S.

REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5301, 2/5301 & 3/5301
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300
3	~	CMU WALL CRACK REPAIR	7/5300
4	---	REMOVE ALL PRECAST SPANDREL BEAMWALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL COUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF C.I.P. FOUNDATION WALL AT LINE 1)	4/5301
5	~	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300
6	~	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300
7	~	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300
8	o	REMOVE AND REPLACE BOLLARDS	5/5400
9	~	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE FLOORING DRAWINGS.	DETAILS THROUGH 3/5302
10	~	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, FOURTOPS, PLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. HATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301
11	N/A	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAMWALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301
12	N/A	DEMOLISH AND REPLACE CONCRETE FILLED PAN STAIR FRAMING, TREADS AND LANDINGS INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIPPED GALVANIZED STEEL FRAMING, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.	SEE 5200 SERIES DRAWINGS AND DELEGATED DESIGN NOTES
13	N/A	INSTALL TRAFFIC COATING ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS	4/5302
14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM TO UNDERSIDE OF ALL BASE BID FILLIGREE SLABS	SEE DRAWINGS 9304 AND NOTES ON DRAWING 5009
15	~	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER	1/5308 AND 6/5300
16	N/A	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"	N/A
17	N/A	REPLACE WHEEL STOPS ANCHORED TO SLAB	N/A
18	N/A	PRECAST SPANDREL BEAM END REPAIR	3/5400
19	N/A	PRECAST SPANDREL BEAM CORNER REPAIR	4/5400

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DiGroupArchitecture
ARCHITECTURE FOR CHANGE
15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.0342
2400 W Hunting Park Ave., Ste 9 • Philadelphia, PA 19126-1302 • T: 215.634.3400

PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28633300

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Drawing Information:
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Date: 11/03/25
Drawn By: KCM
Checked By: RES

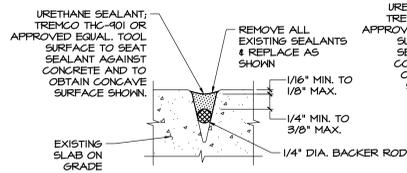
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SECTIONS AND DETAILS

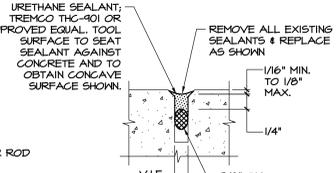
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Sheet 29 of 58

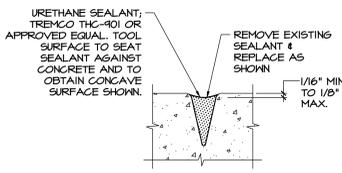
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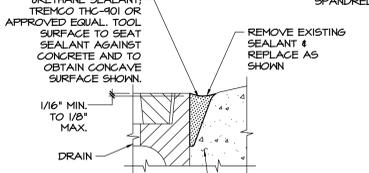
TOOLED JOINT



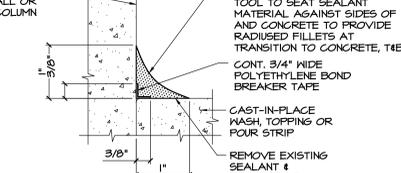
**SAWCUT JOINT
SLAB EDGE JOINT SIMILAR**



TOOLED SEALANT JOINTS



TOOLED SEALANT JOINT AT DRAINS



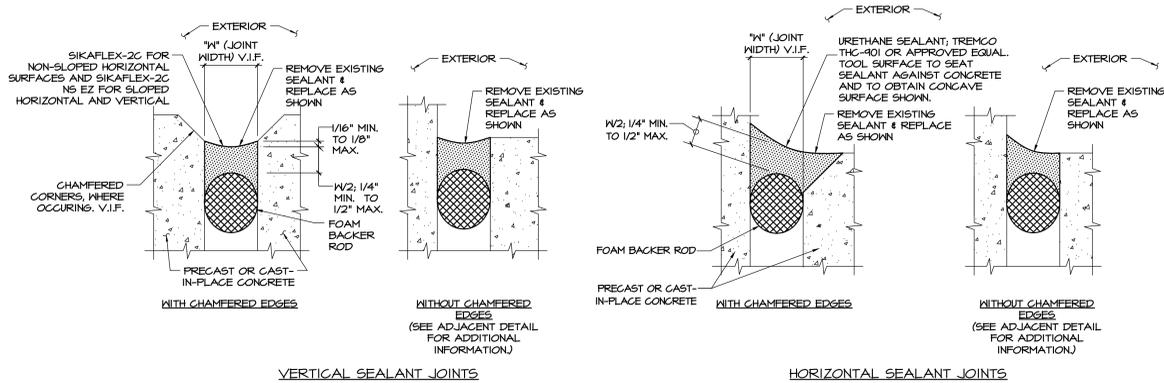
**COVE SEALANT JOINT AT INTERSECTION
AND EDGES**

1 CONCRETE FLOOR SLAB CONSTRUCTION, CONTROL OR ISOLATION (SLAB EDGE) JOINT SEALANT DETAIL

SCALE: N.T.S.
 NOTES:
 1. REMOVE ALL EXISTING SEALANTS PRIOR TO INSTALLING NEW SEALANTS.
 2. JOINT SHALL BE PREPARED PER RECOMMENDATIONS OF SEALANT MANUFACTURER.

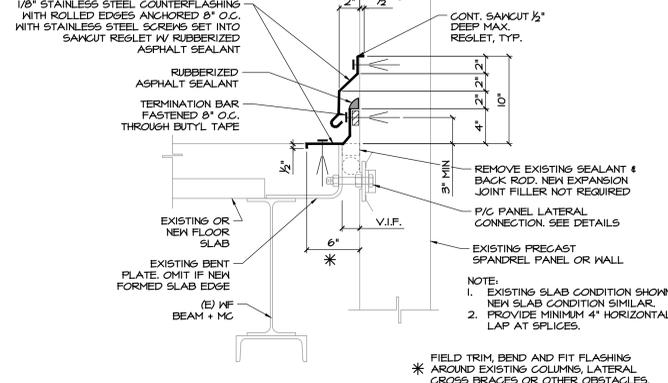
2 SEALANT JOINT DETAILS AT FLOOR SLAB WASHES, TOPPINGS AND POUR STRIPS

SCALE: N.T.S.
 NOTES:
 1. JOINT SHALL BE PREPARED PER RECOMMENDATIONS OF SEALANT MANUFACTURER.
 2. SUBMIT WRITTEN PROPOSED PROCEDURE FOR INSTALLING JOINTS, PREPARING JOINTS FOR SEALANT APPLICATION AND PROCEDURE FOR INSTALLING SEALANTS. SUBMITTAL SHALL INCLUDE PRODUCT INFORMATION AND DESCRIPTION OF ALL MATERIALS.



VERTICAL SEALANT JOINTS

HORIZONTAL SEALANT JOINTS



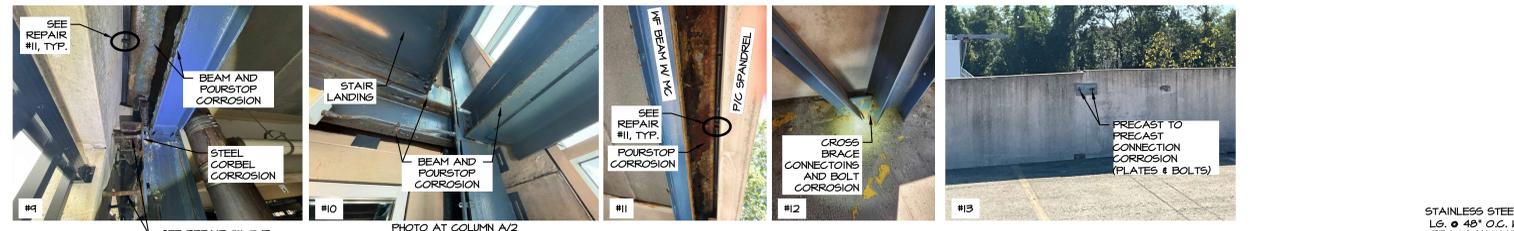
4 REPAIR #4 - JOINT DETAIL BETWEEN NEW AND/OR EXISTING FLOOR SLAB AND PRECAST SPANDREL BEAMS AND WALLS

3 MISCELLANEOUS SEALANT JOINT DETAILS

SCALE: N.T.S.
 NOTES:
 1. JOINT SHALL BE PREPARED PER RECOMMENDATIONS OF SEALANT MANUFACTURER.
 2. SUBMIT WRITTEN PROPOSED PROCEDURE FOR INSTALLING JOINTS, PREPARING JOINTS FOR SEALANT APPLICATION AND PROCEDURE FOR INSTALLING SEALANTS. SUBMITTAL SHALL INCLUDE PRODUCT INFORMATION AND DESCRIPTION OF ALL MATERIALS.

SCALE: 1/2"=1'-0"
 NOTES:
 1. EXISTING SLAB CONDITION SHOWN. NEW SLAB CONDITION SIMILAR.
 2. PROVIDE MINIMUM 4" HORIZONTAL LAP AT SPLICES.
 FIELD TRIM, BEND AND FIT FLASHING * AROUND EXISTING COLUMNS, LATERAL CROSS BRACES OR OTHER OBSTACLES.

REPAIR NUMBER	SYMBOL	REPAIR TYPE	DETAIL
1	---	REMOVE AND REPLACE ALL TOPSIDE SLAB JOINT SEALANT (TYPICAL ALL FLOOR SLABS)	1/5301, 2/5301 & 3/5301
2	~	TOPSIDE CONCRETE CRACK REPAIR (TYPICAL ALL FLOOR SLABS)	3/5300
3	~	CMU WALL CRACK REPAIR	7/5300
4	---	REMOVE ALL PRECAST SPANDREL BEAM/WALL TO FLOOR SLAB JOINT SEALANT AND REPLACE WITH SHEET METAL GOUNTER FLASHING (TYPICAL FOR ALL FLOOR SLABS AND ALONG TOP OF G.I.P. FOUNDATION WALL AT LINE 1)	4/5801
5	~	TOPSIDE CONCRETE SURFACE EROSION REPAIR	2/5300
6	~	TOPSIDE CONCRETE SPALL REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	1/5300 AND 6/5300
7	~	TOPSIDE CONCRETE SUBSURFACE DELAMINATION REPAIR & INSTALL NEW GALVANIC PROTECTION SYSTEM WITHIN PATCH	
8	o	REMOVE AND REPLACE BOLLARDS	5/5400
9	~	REMOVE AND REPLACE TRENCH DRAIN OR FLOOR DRAIN. SEE PLUMBING DWGS.	DETAILS 1 THRU 3/5302
10	■	CLEAN AND PAINT ALL EXPOSED STRUCTURAL STEEL FRAME INCLUDING COLUMNS, BEAMS, BRACES, POURSTOPS, PLATES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS. MATCH INDICATES AREAS OF KNOWN CORROSION.	5/5301 AND 6/5301
11	N/A	REPAIR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL BEAM/WALLS TO STRUCTURAL STEEL COLUMNS OR CONCRETE SLAB	7/5301
12	N/A	DEMOLISH AND REPLACE CONCRETE FILLED METAL PAN STAIR FRAMING, TREADS AND LANDING INCLUDING STEEL STRINGERS, BEAMS, RAILINGS AND CONNECTIONS WITH HOT DIP GALVANIZED STEEL. FRAMING, CONNECTIONS AND CONSTRUCTION GEOMETRY IS TO GENERALLY MATCH EXISTING CONDITIONS.	SEE 5200 SERIES DRAWINGS AND DELEGATED DESIGN NOTES
13	N/A	INSTALL TRAFFIC COATING ON ALL STRUCTURAL STEEL SUPPORTED CONCRETE FLOORS INCLUDING STAIR TREADS AND STAIR LANDINGS	4/5302
14	N/A	INSTALL THERMALLY SPRAYED PROPRIETARY AZI ALLOT CATHODIC PROTECTION SYSTEM TO INSIDE OF ALL BASE BID FILLGEE SLABS	SEE DRAWINGS 5304 AND NOTES ON DRAWING 5003
15	■	REMOVE AND REPLACE FLOOR SLAB AND INSTALL NEW STEEL BEAMS AND GALVANIC PROTECTION SYSTEM AROUND PERIMETER	1/5305 AND 6/5300
16	N/A	REMOVE & REPLACE DAMAGED VEHICLE GUARDRAIL "IN KIND"	N/A
17	N/A	REPLACE WHEEL STOPS ANCHORED TO SLAB	N/A
18	N/A	PRECAST SPANDREL BEAM END REPAIR	3/5400
19	N/A	PRECAST SPANDREL BEAM CORNER REPAIR	4/5400



NOTES:
 1. ABOVE PHOTOS REPRESENT SOME EXAMPLES OF CORRODED COMPONENTS REQUIRING REPAIRS. OTHER SIMILAR CORRODED COMPONENTS SHALL BE LIKEWISE REPAIRED.
 2. CLEAN AND PAINT AREAS OF STRUCTURAL STEEL FRAME COMPONENT CORROSION INCLUDING COLUMNS, BEAMS, BRACES, CORBELS, POURSTOPS, PLATES, CLIP ANGLES, CONNECTIONS, NUTS, BOLTS AND MISCELLANEOUS COMPONENTS

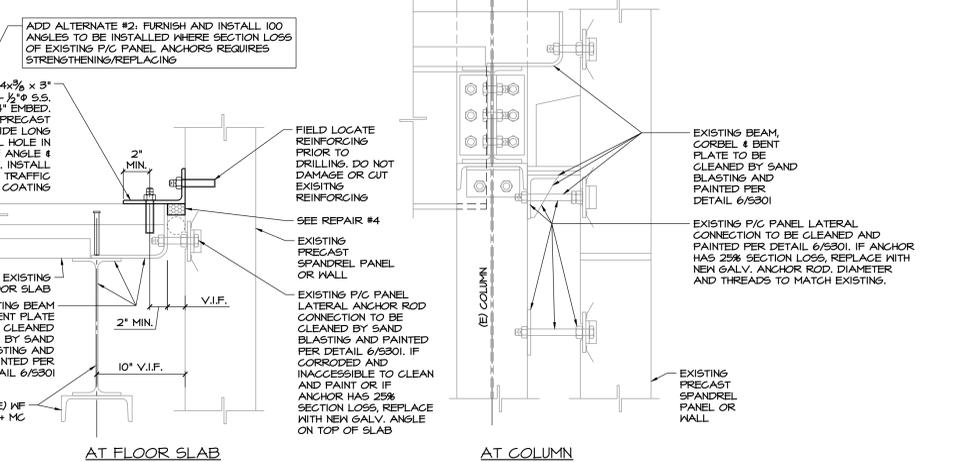
5 CORRODED MISCELLANEOUS STRUCTURAL STEEL COMPONENT REPAIR

SCALE: N.T.S.

NOTES:
 1. POWER TOOL CLEANING AND INSPECTION REPAIR.
 • CLEAN ALL EXISTING STEEL PER SURFACE PREPARATION STANDARD SSPC-SP3 POWER TOOL CLEANING DOWN TO BARE METAL. NO LATENT RUST SCALE TO REMAIN.
 • INSPECT EXISTING STEEL TO VERIFY THAT 75% OR MORE OF ORIGINAL CROSS SECTION REMAINS INTACT. NOTIFY E.O.R. IF STEEL IS DETERIORATED GREATER THAN 25%.
 • AFTER STEEL HAS BEEN CLEANED, ALLOW ENGINEER OF RECORD TO INSPECT PORTION OF CLEANED AND EXPOSED STEEL PRIOR TO PROCEEDING. ENGINEER OF RECORD MUST APPROVE EXISTING CONDITIONS PRIOR TO PROCEEDING WITH NEW CONSTRUCTION.
 2. PAINTING OF ALL STEEL COMPONENTS:
 • AT EXISTING STEEL REQUIREMENTS, CLEAN/PREP EXISTING STEEL PER PAINT MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.
 • AT NON-GALVANIZED STEEL: PAINT STEEL WITH CARBOLINE CARBOHASTIC 44 HC, TNEGEC SERIES 66 HI-BUILD EPOXYLINE, SHERWIN-WILLIAMS PRO-INDUSTRIAL HIGH PERFORMANCE EPOXY, OR AN APPROVED EXTERIOR GRADE EPOXY HIGH PERFORMANCE COATING (HPC).
 • FOLLOW MANUFACTURER'S WRITTEN INSTRUCTIONS, RECOMMENDATIONS AND PRODUCT SPECIFICATIONS.

6 TYPICAL STRUCTURAL STEEL CLEANING AND PAINTING

SCALE: N.T.S.



7 REPAIR #11 DETAIL FOR CORRODED ANCHOR RODS CONNECTING PRECAST CONCRETE SPANDREL TO STRUCTURAL STEEL FRAME

SCALE: 1/2"=1'-0"

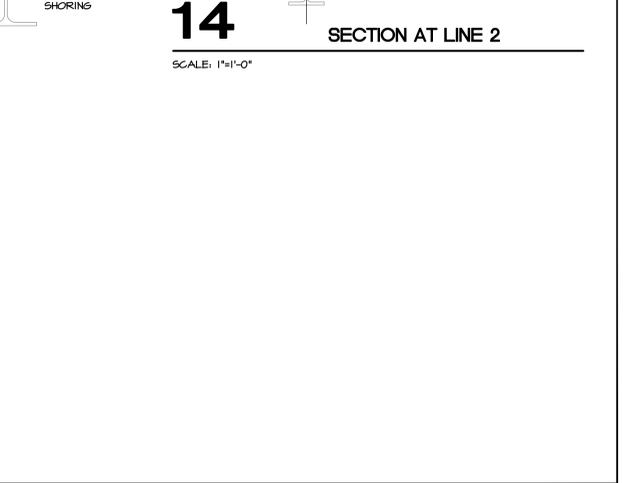
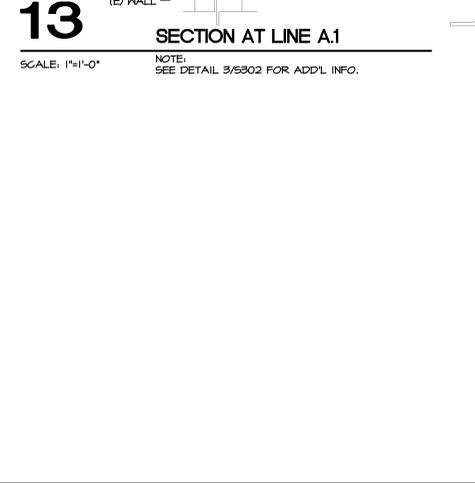
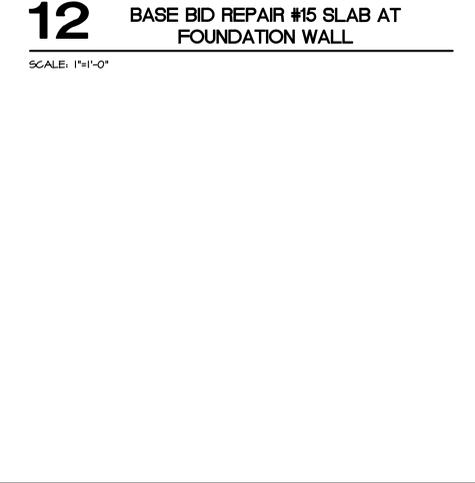
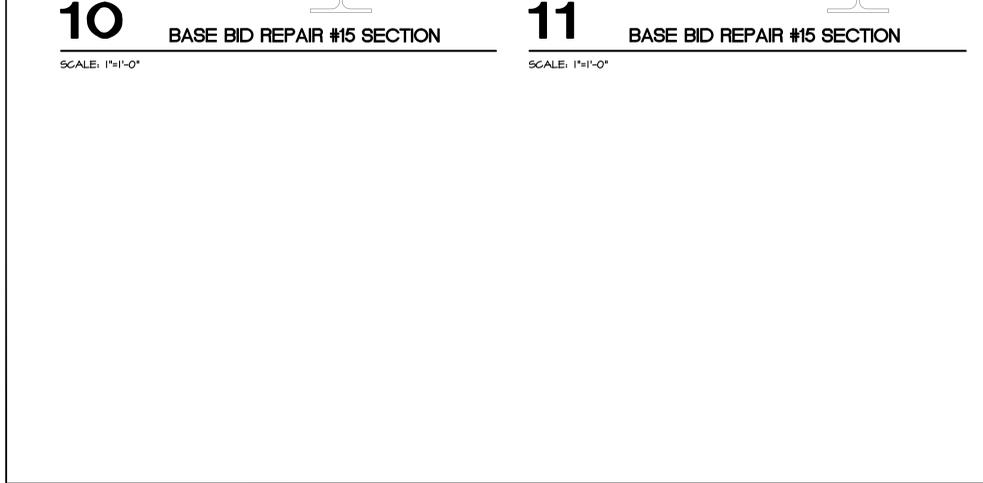
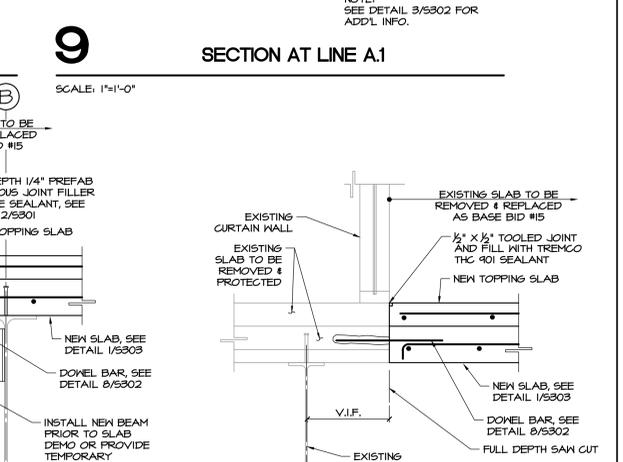
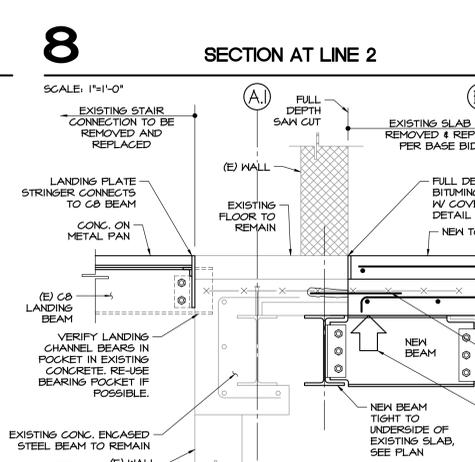
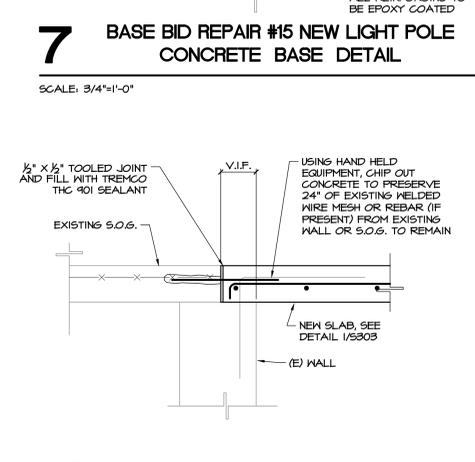
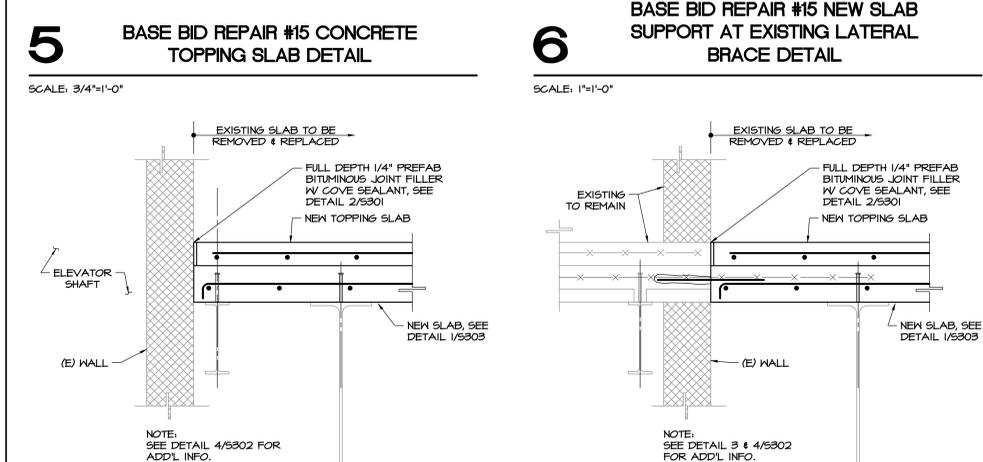
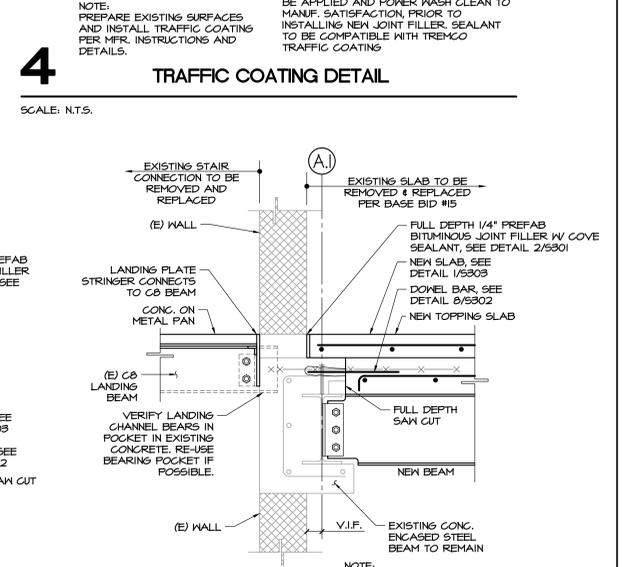
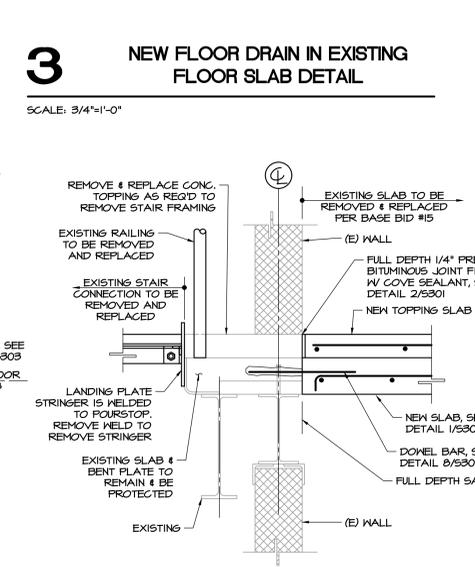
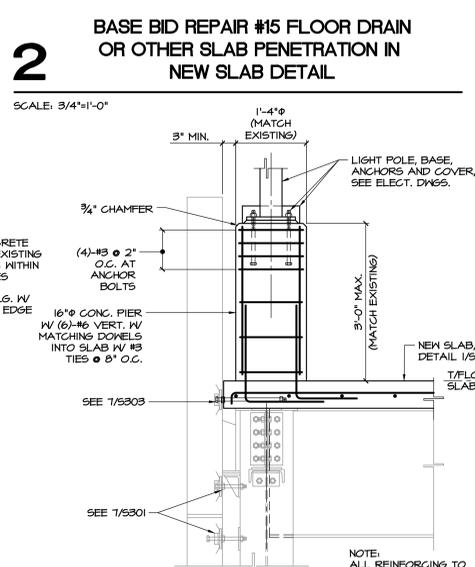
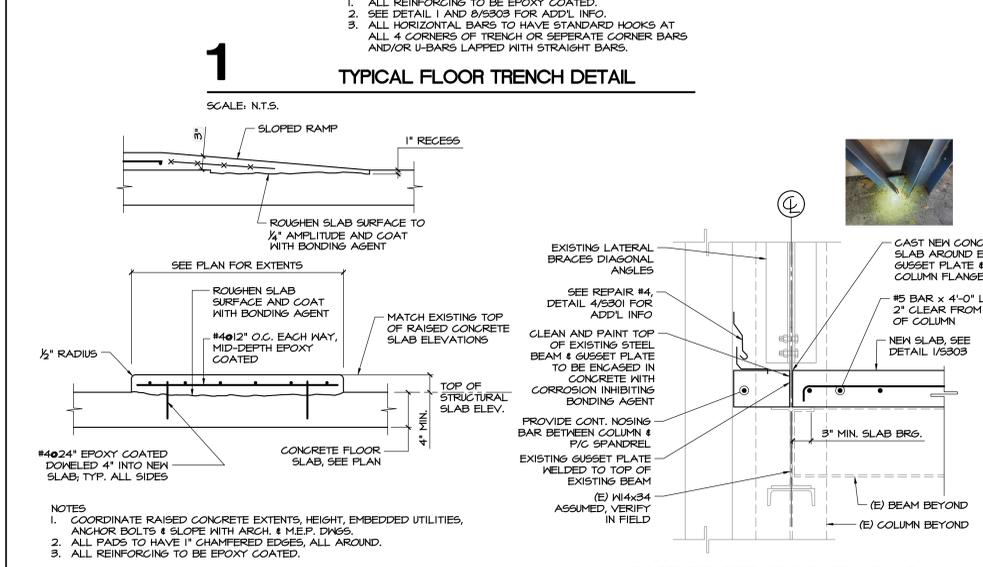
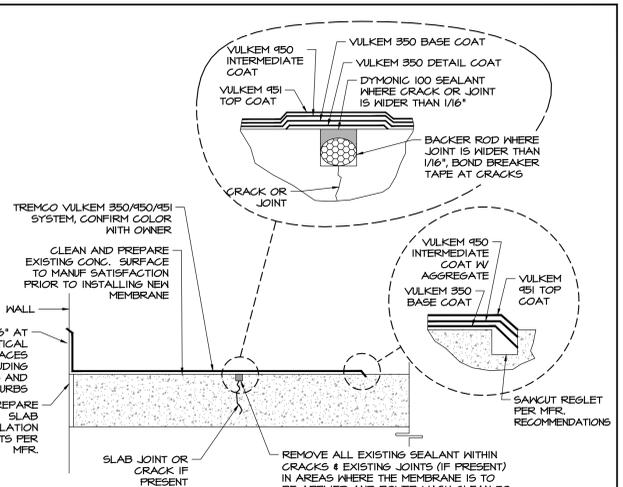
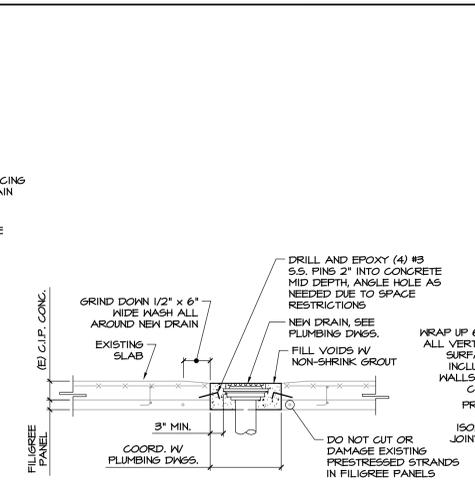
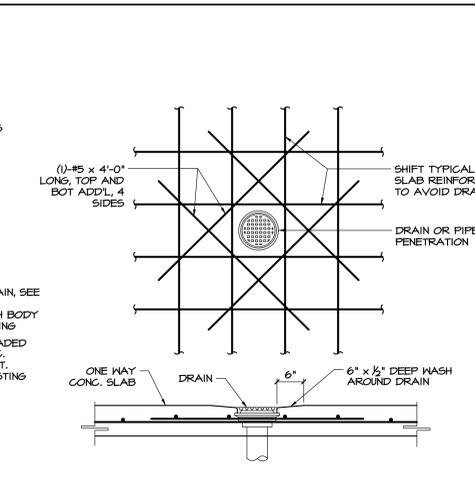
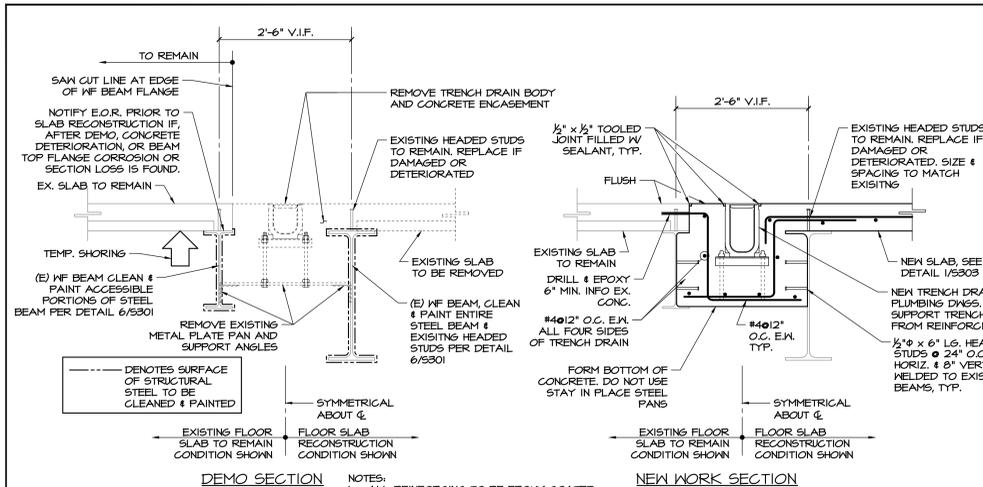
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 ARCHITECTURE FOR CHANGE
 15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6342
 2450 W. Hunting Park Ave., Bldg 9 • Philadelphia, PA 19128-1302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.255.9775 F: 973.255.9774
 NJ COA NO. GA28633300

Ross E. Stuart, PE
 NJ PE GE55129

Client:
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 10 Elizabethtown Plaza - 5th Floor
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 Project:
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 PARKING GARAGE REPAIRS
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 Drawing Information:
 Project No: 25.022
 Date: 11/03/25
 Drawn By: KCM
 Checked By: RES
 Sheet Name:
SECTIONS AND DETAILS
 Sheet No:
S301
 Sheet 30 of 58



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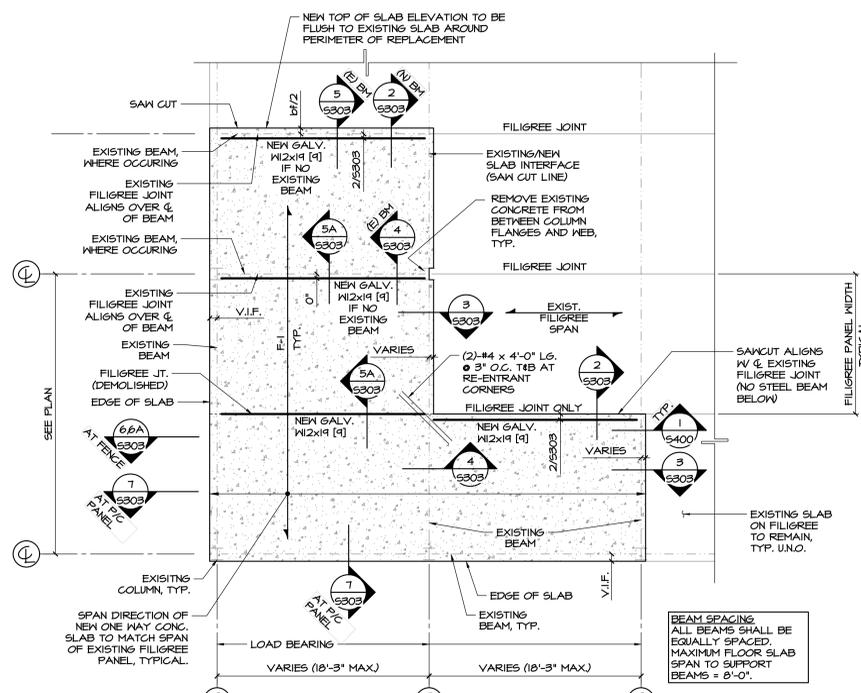
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Pennoni ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9715 F: 973.265.9774
NJ COA NO. GA28633300

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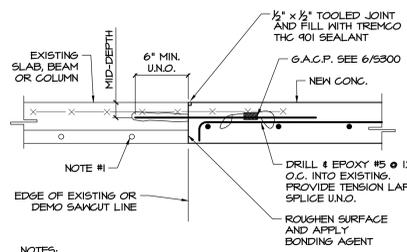
DO NOT SCALE. DRAWING MAY BE PRINTED AT REDUCED SCALE. CONSULT WITH ARCHITECT FOR DIMENSIONS.

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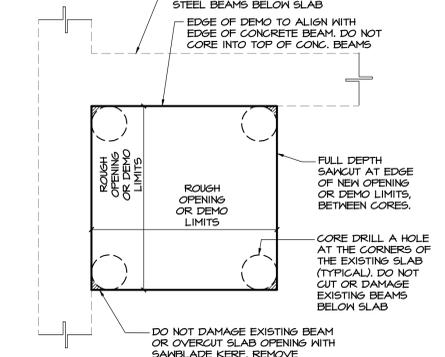
1 EXISTING FILIGREE SLAB REPLACEMENT PLAN DETAIL
SCALE: N.T.S.

- NOTES:
- SEE TOPSIDE PLANS FOR SLAB LAYOUT PLAN AND TYPICAL SHEET NOTES. PROVIDE FULL DEPTH SAW CUTS OF EXISTING SLAB. DO NOT DAMAGE TOP OF EXISTING STEEL BEAMS OR EXISTING WELDED HEADED STUDS. FIELD DETERMINE EXISTING SLAB THICKNESS PRIOR TO SAW CUTTING.
 - TEMPORARILY SHORE EXISTING SLABS TO REMAIN DURING SAW CUTTINGS AND DEMOLITION. DO NOT COVER CUT EXISTING CAST IN PLACE SLAB OR FILIGREE PANELS AT CORNERS OF PERIMETER SAW CUT LINES. SEE DETAIL 4/5303.
 - DENOTES SPAN OF NEW 6" THICK MINIMUM (7" MAXIMUM) NORMAL HEIGHT CAST IN PLACE CONCRETE SLAB REINFORCED WITH #5 @ 18" O.C. EACH WAY, MID-DEPTH EPOXY COATED BARS SUPPORTED BY EITHER NEW OR EXISTING STEEL BEAMS AT 8'-0" O.C. MAXIMUM. ACTUAL THICKNESS VARIES TO PROVIDE ADEQUATE SLOPE TO DRAIN AND PREVENT PONDING. SEE NOTE 5A-B ON THE TOPSIDE PLANS.
 - ALL SLAB REINFORCING TO BE EPOXY COATED.
 - REFER TO SLAB REPLACEMENT NOTES ON THE TOPSIDE PLANS FOR ADDL. INFO.
 - INSTALL NEW GALVANIC PROTECTION SYSTEM AROUND PERIMETER OF NEW SLAB SIMILAR TO DETAIL 6/5300.
 - AT NEW CONCRETE TO EXISTING CONCRETE, ROUGHEN EXISTING CONCRETE EDGE/SURFACE TO 1/4" AMPLITUDE (CSP 10) AND APPLY SIKADUR 32 HI-MOD EPOXY BONDING AGENT.
 - COAT ALL CUT EXISTING REBAR TO REMAIN WITH ANTI CORROSION COATINGS (EXCEPT AT NEW COUPLERS).
 - CLEAN AND PAINT TOP OF EXISTING STEEL BEAMS TO RECEIVE CONCRETE WITH CORROSION INHIBITING BONDING AGENT.
 - DENOTES NUMBER OF 3/4"x 0'-5" LONG HEADED SHEAR STUDS WELDED TO BEAM. SEE DETAIL 2/5400.
 - SEE DETAIL 1/5400 FOR NEW BEAM CONNECTION TO EXISTING STEEL BEAM OR COLUMN.

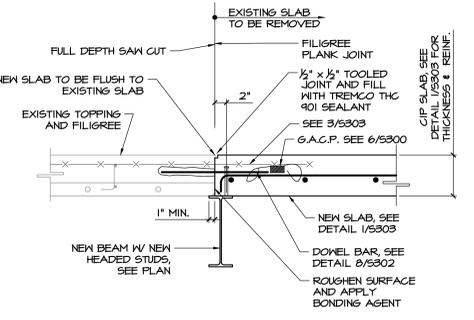


- NOTES:
- DO NOT CUT OR DAMAGE EXISTING SLAB, BEAM OR COLUMN REBAR WHILE DRILLING FOR POST-INSTALLED EPOXY ANCHORS/REBAR DONELS. SCAN EXISTING CONCRETE PRIOR TO INSTALLING POST-INSTALLED ANCHORS TO LOCATE EXISTING REINFORCING.
 - AT NEW CONCRETE TO EXISTING CONCRETE, ROUGHEN EXISTING SURFACE TO 1/4" AMPLITUDE (CSP 10) AND APPLY SIKADUR 32 HI-MOD EPOXY BONDING AGENT.
 - DETAIL IS DIAGRAMMATIC. SEE SECTIONS FOR ACTUAL CONSTRUCTION GEOMETRY.

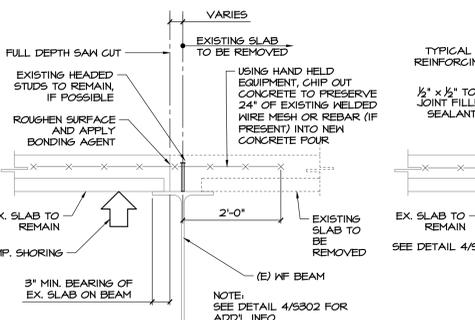
8 POST-INSTALL EPOXY DOWEL TYPICAL DETAIL
SCALE: 1"=1'-0"



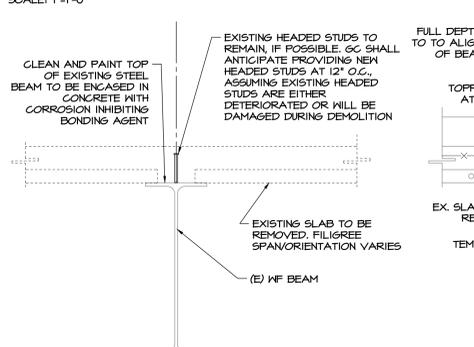
9 DEMOLITION SAWCUT DETAIL
SCALE: 3/4"=1'-0"



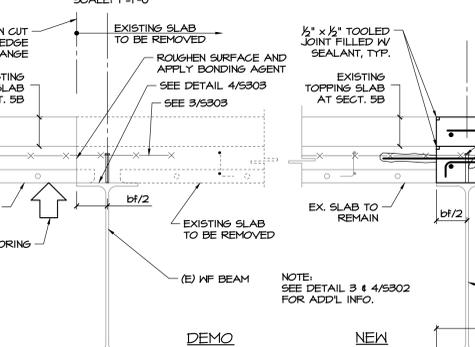
2 EDGE OF NEW SLAB PARALLEL TO FILIGREE SPAN (NON-LOAD BEARING) WITH NO EXISTING STEEL BEAM
SCALE: 1"=1'-0"



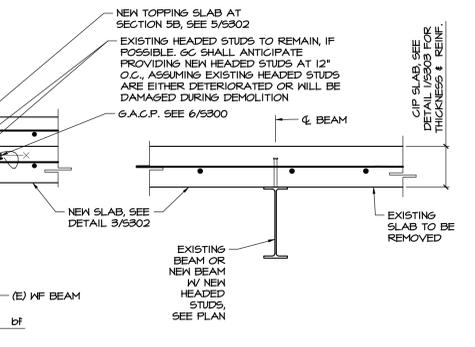
3 EDGE OF NEW SLAB AT FILIGREE LOAD BEARING DETAIL
SCALE: 1"=1'-0"



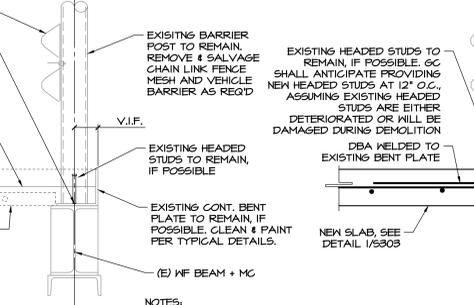
4 TYPICAL BEAM PREP AT REMOVED SLAB
SCALE: 1"=1'-0"



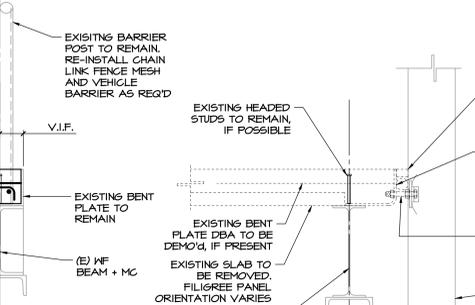
5,5B EDGE OF NEW SLAB PERPENDICULAR TO FILIGREE SPAN (NON-LOAD BEARING) DETAIL
SCALE: 1"=1'-0"



5A NEW SLAB PARALLEL TO EXISTING FILIGREE JOINT DETAIL
SCALE: 1"=1'-0"



6,6A NEW SLAB EDGE AT CHAIN LINK FENCE BARRIER DETAIL
SCALE: 1"=1'-0"



7 NEW SLAB EDGE AT PRECAST FACADE DETAIL
SCALE: 1"=1'-0"

6,6A NEW SLAB EDGE AT CHAIN LINK FENCE BARRIER DETAIL

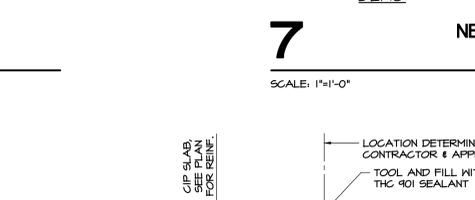
SCALE: 1"=1'-0"

HANGER ROD OR OTHER CONNECTION TO UNDERSIDE OF SLAB. MAXIMUM PERMITTED SERVICE LEVEL LOAD = 800 LBS. SEE TABLE FOR SPACINGS FOR OTHER LOADS.

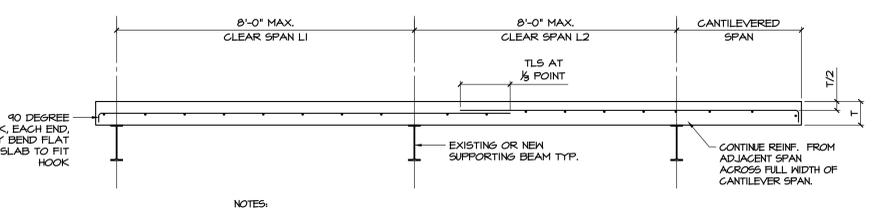
SERVICE LEVEL HANGER LOAD	MINIMUM PERMITTED SPACING BETWEEN ADJACENT SLAB CONNECTIONS (EACH WAY)
800#	6'-0"
600#	5'-0"
400#	4'-0"
200#	3'-0"

- NOTES:
- THIS DETAIL SHOWS MAXIMUM PERMITTED CONCENTRATED LOADS WHICH MAY BE SUSPENDED FROM UNDERSIDE OF CONCRETE SLABS FOR VARIES HANGER SPACING.
 - CONTRACTOR SHALL LOCATE THE CONNECTIONS TO THE UNDERSIDE OF THE SLAB SO THAT THE LOADS APPLIED TO THE SLAB DO NOT EXCEED THE MAXIMUM PERMITTED VALUES INDICATED ABOVE.
 - CONTRACTOR IS RESPONSIBLE FOR SELECTING THE APPROPRIATE POST-INSTALLED ANCHORS THAT ARE SUITABLE FOR INSTALLATION IN THE SLABS AND CAPABLE OF SUPPORTING THE APPLIED LOADS WITH A MINIMUM SAFETY FACTOR, F.S. = 8.
 - ANCHORS TO CONCRETE SUPPORTING LOADS GREATER THAN 400 LBS SHALL BE HILTI HEA UNDERCUT ANCHORS OR APPROVED EQUAL ANCHORS.
 - REINFORCING STEEL IN SLAB SHALL BE LOCATED WITH A METAL DETECTOR PRIOR TO DRILLING HOLES; ANCHORS SHALL BE LOCATED TO AVOID DAMAGING REINFORCING STEEL IN SLAB.

11 CRITERIA FOR ATTACHMENT OF SUSPENDED LOADS FROM CONCRETE SLABS
SCALE: N.T.S.



12 NEW SLAB CONSTRUCTION JOINT DETAIL
SCALE: 3/4"=1'-0"



10 BAR BENDING AND PLACING ONE-WAY FLAT SLAB
SCALE: N.T.S.

- SHEET NOTES:
- ALL NEW SLAB REINFORCING TO BE EPOXY COATED.
 - PROVIDE VECTOR GALVANIZED W/4 EMBEDDED GALVANIC ANODES AT PERIMETER OF NEW CONCRETE FLOOR SLAB REPLACEMENTS. SEE DETAIL 6/5300.

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1085 RAYMOND BOULEVARD
SUITE 2102
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T: 973.255.9775 F: 973.255.9774
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NJ PE GE551929

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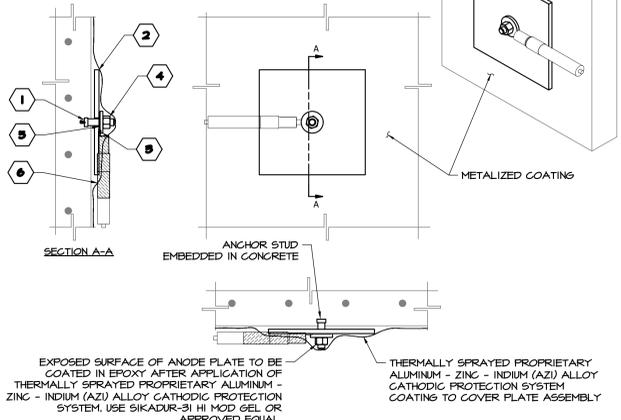
Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
Block 246 / Lot 1
200 West 2nd Street
Plainfield, NJ 07063

Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
BASE BID REPAIR #15 SECTIONS AND DETAILS

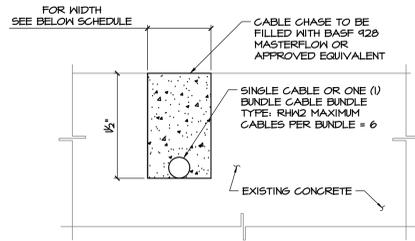
Sheet No:
S303
Sheet 32 of 58

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	STUD 5/8 X 18	ANCHOR STUD FOR CONCRETE EMBEDMENT
2	1	ANODE BOND PLATE	4" X 4" X 1/8" PERFORATED ALUMINUM PLATE
3	1	ASTM F436 - 5/16	WASHER A
4	1	ANSI B10.2.4.2M - 5/16 X 18	HEX NUT
5	1	RC910-14X	RING TERMINAL
6	1	12AKS HMKFE RED	ANODE/CATHODE FEEDER
7	1	3MEPS-400	HEAT SHRINK TUBING



1 ADD ALTERNATE #1 - MONITORED ANODE PLATE INSTALLATION DETAIL

SCALE: N.T.S.



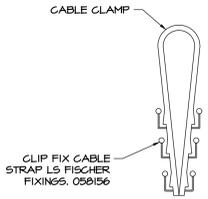
ITEM	STRANDS	ANV / TYPE	NOMINAL DIAMETER	MINIMUM WIDTH OF CABLE CHASE			
				1 BUNDLE	2 BUNDLES	3 BUNDLES	4 BUNDLES
1	MULTI	22 / RH#2	0.942"	0.90"	1.16"	1.80"	2.50"
2	MULTI	20 / RH#2	0.920"	0.88"	1.16"	1.80"	2.50"
3	MULTI	18 / RH#2	0.898"	0.86"	1.16"	1.80"	2.50"
4	MULTI	16 / RH#2	0.868"	1.00"	1.25"	2.00"	2.70"
5	MULTI	14 / RH#2	0.835"	1.00"	1.25"	2.00"	2.70"
6	MULTI	12 / RH#2	0.808"	1.00"	1.25"	2.00"	2.70"

2 ADD ALTERNATE #1 - CABLE CHASE DETAIL

SCALE: N.T.S.

NOTES:

- DO NOT APPLY FERROGARD 903 CORROSION INHIBITING COATING TO ANY CONCRETE SURFACE WHICH IS TO HAVE THERMALLY SPRAYED PROPRIETARY ALUMINUM - ZINC - INDIUM (AZI) ALLOY CATHODIC PROTECTION SYSTEM APPLIED.
- VERIFY/CONFIRM THE SURFACE PREP IS GOOD PRIOR TO SPRAY BEING APPLIED.
- VERIFY CONTINUITY PRIOR TO SPRAYING THERMALLY SPRAYED CATHODIC PROTECTION. TYPICALLY HE USE THE REPAIR AREAS TO PERFORM THESE, BUT IN GENERAL BASED ON OUR GUIDELINES IT IS 5 SPOTS EVERY 100 SQ. FT.
- VERIFY THAT THE REFERENCE CELLS ARE INSTALLED PROPERLY AND WORKING AS IT IS IMPORTANT FOR THE MONITORING PROCESS.
- AFTER THERMALLY SPRAYED CATHODIC PROTECTION HAS BEEN APPLIED, MEASURE THE THICKNESS OF THERMALLY SPRAYED CATHODIC PROTECTION MATERIAL.
- AFTER THERMALLY SPRAYED CATHODIC PROTECTION HAS BEEN APPLIED, MEASURE THE ADHESION STRENGTH OF THE SPRAY MATERIAL TO THE BARE CONCRETE.



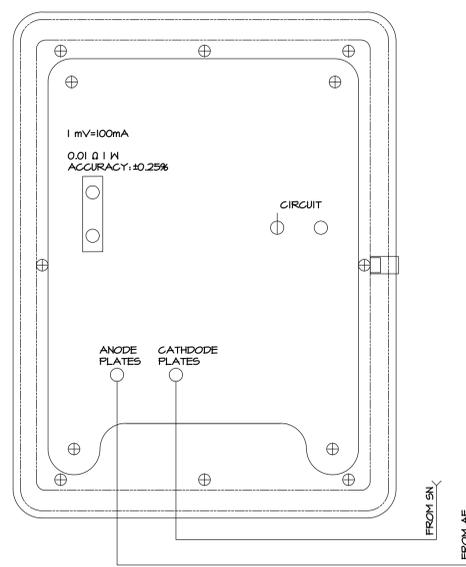
3 ADD ALTERNATE #1 - CABLE CHASE FIXING DETAIL

SCALE: N.T.S.

LEGEND		
NO.	DESCRIPTION	SYMBOL
1	ANODE FEEDER CONNECTION	
2	NEGATIVE CONNECTION	
3	REFERENCE ELECTRODES	
4	JUNCTION / TERMINATION BOX	
5	DIRECT BURIAL CABLE	
6	METALLIZING SPRAY. SEE DRAWING 5003 FOR ADDL INFO	

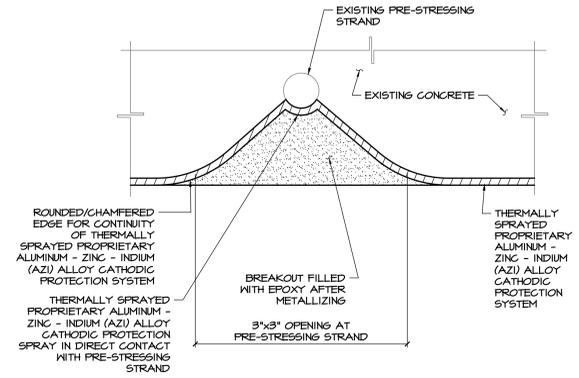
NOTES:

- CABLES TO BE ROUTED VIA EMBEDDED CABLE CHASE OR SURFACE CONDUITS AS DEPTH OF COVER ALLOWS.
- FINAL LOCATION OF JUNCTION BOX TO BE DETERMINED BASED ON SITE CONDITIONS.
- TOTAL QUANTITY, SPACINGS, AND LOCATIONS OF CONCRETE BREAKOUTS FOR CONTACT OF THERMALLY SPRAYED PROPRIETARY ALUMINUM - ZINC - INDIUM (AZI) ALLOY CATHODIC PROTECTION SYSTEM WITH PRE-STRESSING STRANDS TO BE DETERMINED BASED ON SITE CONDITIONS.
- ENSURE METALLIZED SURFACES OF THE MONITORED ELEMENTS ARE DISCONTINUOUS FROM NON-MONITORED ELEMENTS. DISCONTINUITY TO BE ACHIEVED BY MASKING BOUNDARY OF MONITORED SURFACE PRIOR TO METALLIZING.
- SEE PLANS FOR CONCRETE REPAIRS REQUIRED PRIOR TO APPLICATION OF AZI SYSTEM.



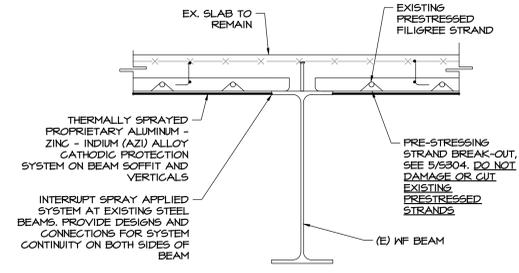
4 ADD ALTERNATE #1 - MONITORING JUNCTION BOX DETAIL

SCALE: N.T.S.



5 ADD ALTERNATE #1 - ANODE DIRECT CONNECTION INSTALLATION DETAIL

SCALE: N.T.S.



6 ADD ALTERNATE #1 - TYPICAL SLAB SECTION

SCALE: 1"=1'-0"

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1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.255.9775 F: 973.255.9774
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NJ PE CE55123

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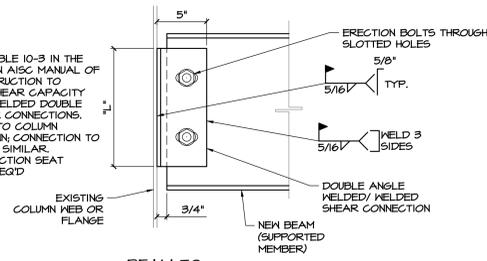
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Block 246 / Lot 1
200 West 2nd Street
Plainfield, NJ 07063

Drawing Information:
Project No: 25.022
Date: 11/03/25
Drawn By: KCM
Checked By: RES

Sheet Name:
ADD ALTERNATE #1 THERMALLY SPRAYED PROPRIETARY AZI ALLOY CATHODIC PROTECTION SYSTEM DETAILS

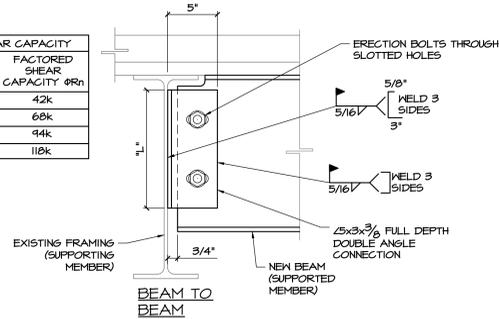
Sheet No:
S304
Sheet 33 of 58

- NOTES:
 1. REFER TO TABLE 10-3 IN THE THIRD EDITION AISC MANUAL OF STEEL CONSTRUCTION TO DETERMINE SHEAR CAPACITY OF WELDED/WELDED DOUBLE ANGLE SHEAR CONNECTIONS.
 2. CONNECTION TO COLUMN FLANGE SHOWN; CONNECTION TO COLUMN WEB SIMILAR.
 3. PROVIDE ERECTION SEAT ANGLES AS REQ'D



BEAM TO COLUMN

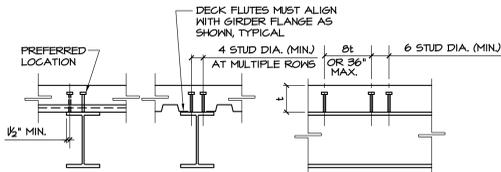
BEAM SIZE	DIM L"	FACTORED SHEAR CAPACITY @Rn
W8, W10, C10	5 1/2"	42k
W12	8 1/2"	68k
W16	11 1/2"	94k
W18	14 1/2"	118k



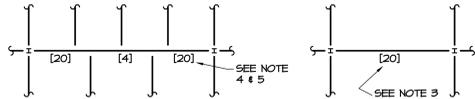
BEAM TO BEAM

1 NEW STEEL BEAM TO EXISTING BEAM/COLUMN DOUBLE ANGLE SHEAR CONNECTION

SCALE: N.T.S.

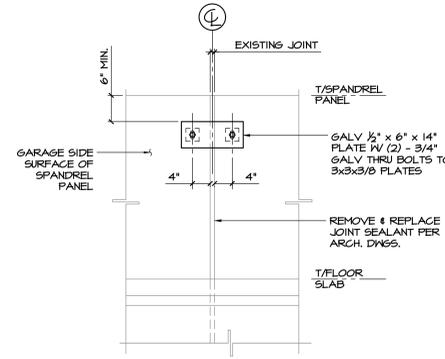


1. ALL STUDS TO BE 3/4" Ø. SEE PLAN FOR ACTUAL NUMBER OF STUDS.
 2. AFTER WELDING INTO FINAL POSITION A 1" MIN. (2" MAX) CONCRETE COVER ABOVE HEADS SHALL BE MAINTAINED. TOP OF STUDS TO BE MINIMUM 1/2" ABOVE TOP OF STEEL DECK.
 3. WHERE A SINGLE NUMBER OF SHEAR STUD CONNECTORS IS INDICATED THIS [] ON PLAN. THE NUMBER OF SHEAR CONNECTORS SHALL BE EQUALLY SPACED ALONG THE LENGTH OF THE BEAM.
 4. WHERE THE NUMBER OF SHEAR STUDS IS INDICATED AS A SERIES OF STUDS SHOWN BETWEEN BEAMS, THE SHEAR CONNECTORS SHALL BE EQUALLY SPACED BETWEEN ADJACENT BEAMS.
 5. WHERE STUDS FILL EVERY TROUGH IN THE DECK, THE REMAINING STUDS SHALL BE INSTALLED ON TWO OR MORE ROWS STARTING AT EACH END OF THE BEAMS.



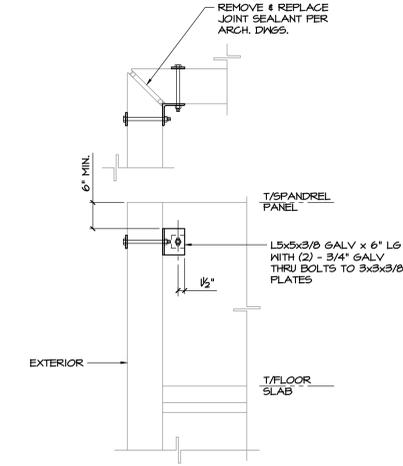
2 TYPICAL SHEAR STUD DETAILS

SCALE: N.T.S.



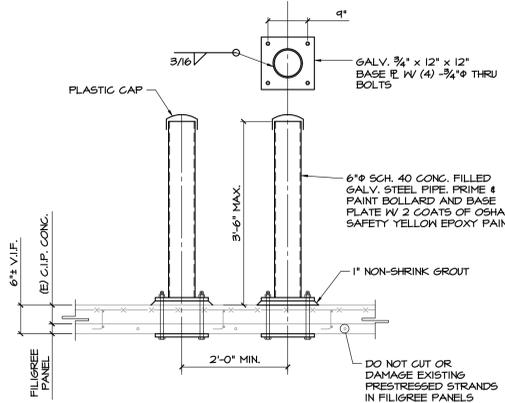
3 PRECAST SPANDREL BEAM END REPAIR

SCALE: N.T.S.



4 PRECAST SPANDREL BEAM CORNER REPAIR

SCALE: N.T.S.



- NOTE:
 1. EXISTING SLAB SHOWN, NEW SLAB CONDITION SIMILAR.
 2. LOCATE EXISTING PRESTRESSED STRANDS IN FILIGREE PANELS PRIOR TO DRILLING HOLES.
 3. INSTALL BOLLARDS AFTER INSTALLING TRAFFIC COATING.

5 NEW BOLLARD DETAIL

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 SUITE 2102
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Project:
 GERRY B. GREEN PLAZA
 PARKING GARAGE REPAIRS
 Block 246 / Lot 1
 200 West 2nd Street
 Plainfield, NJ 07063

Drawing Information:
 Project No: 25.022
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TYPICAL DETAILS

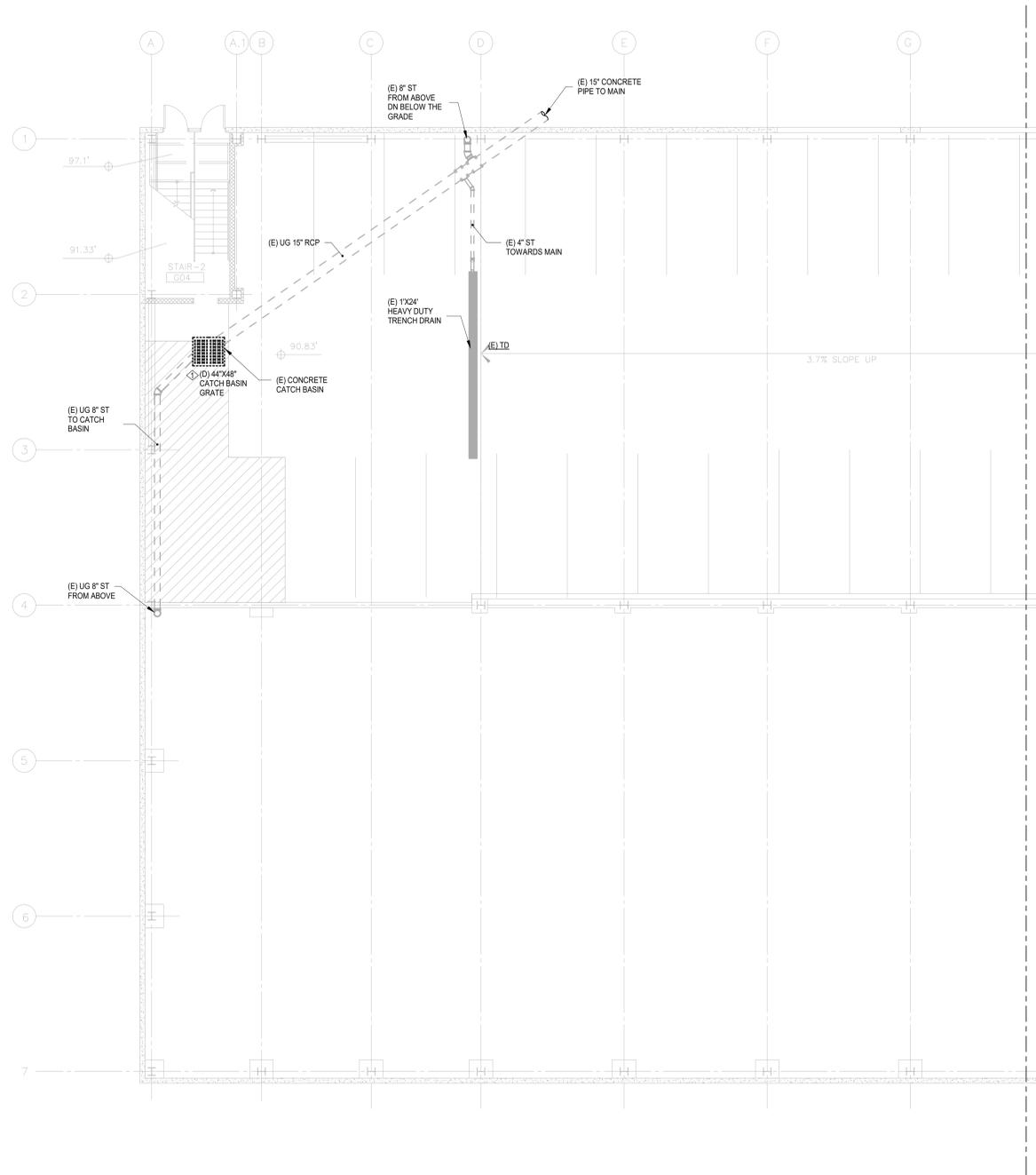
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KEYNOTES

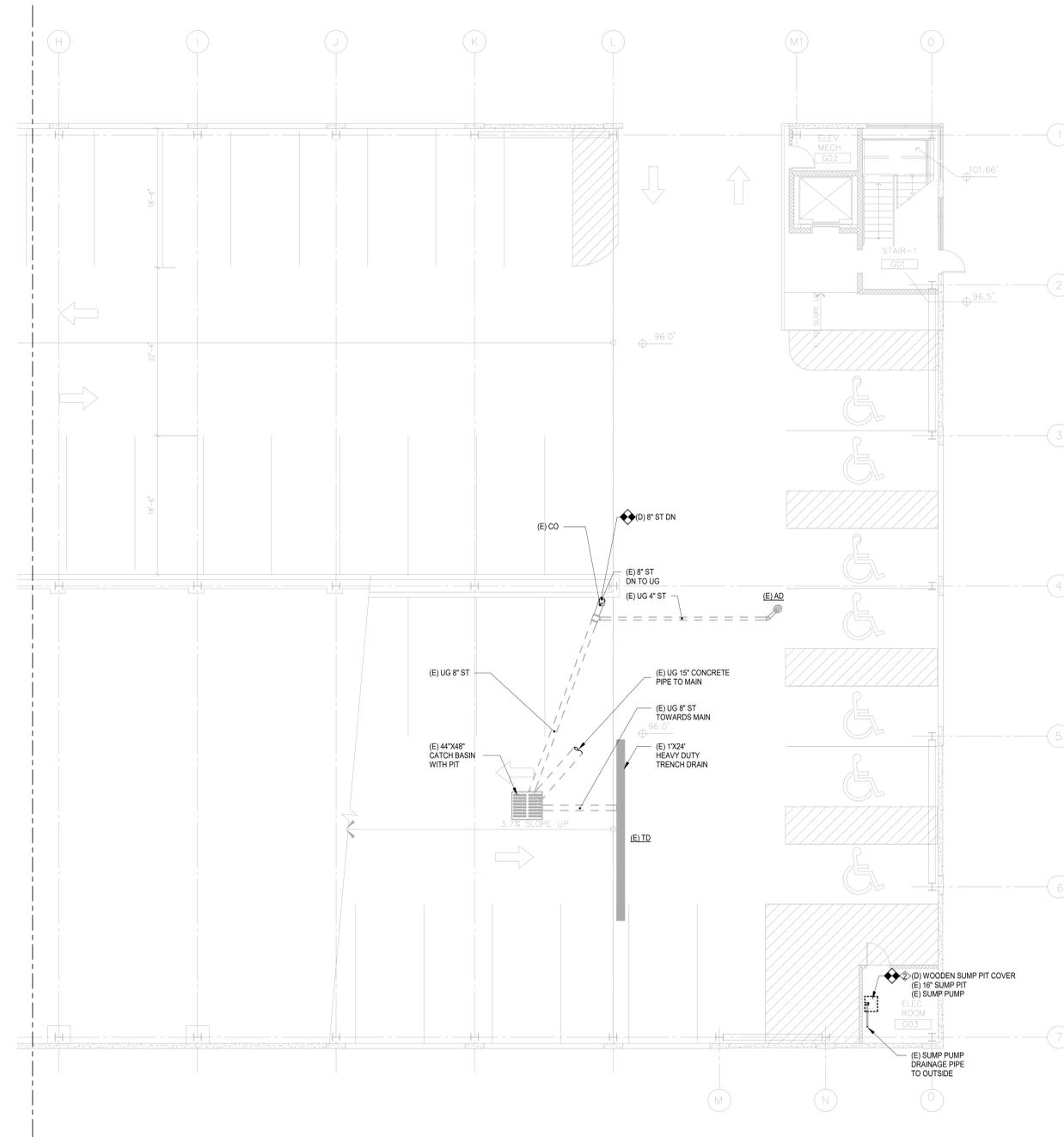
- 1 DISCONNECT AND REMOVE CATCH BASIN GRATE. SEE KEYNOTE 1 ON SHEET P201 FOR CATCH BASIN MAINTENANCE.
- 2 REMOVE EXISTING WOOD COVER AT SUMP PIT.

GENERAL SHEET NOTES

- 1 REFER TO P101 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
- 2 PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
- 3 CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
- 4 PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SDR UPON COMPLETION OF WORK.
- 5 PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
- 6 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
- 7 ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
- 8 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
- 9 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
- 10 ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
- 11 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 12 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 13 PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
- 14 ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.



2 LEVEL 1-A PLUMBING DEMOLITION PLAN
 P101 1/8" = 1'-0"



1 LEVEL 1-B PLUMBING DEMOLITION PLAN
 P101 1/8" = 1'-0"

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 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

ROBERT H. GOULD
 NJ PE 24GE05550100

Client:
UNION COUNTY AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS

Block 246 / Lot 1
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 PLAINFIELD, NJ
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 Project No: DIGAX25005
 Date: 11/03/2025
 Drawn By: NL
 Checked By: RHG

Sheet Name:
LEVEL 1 PLUMBING DEMOLITION PLAN

Sheet No:
P101
 SHEET 38 OF 58

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KEYNOTES

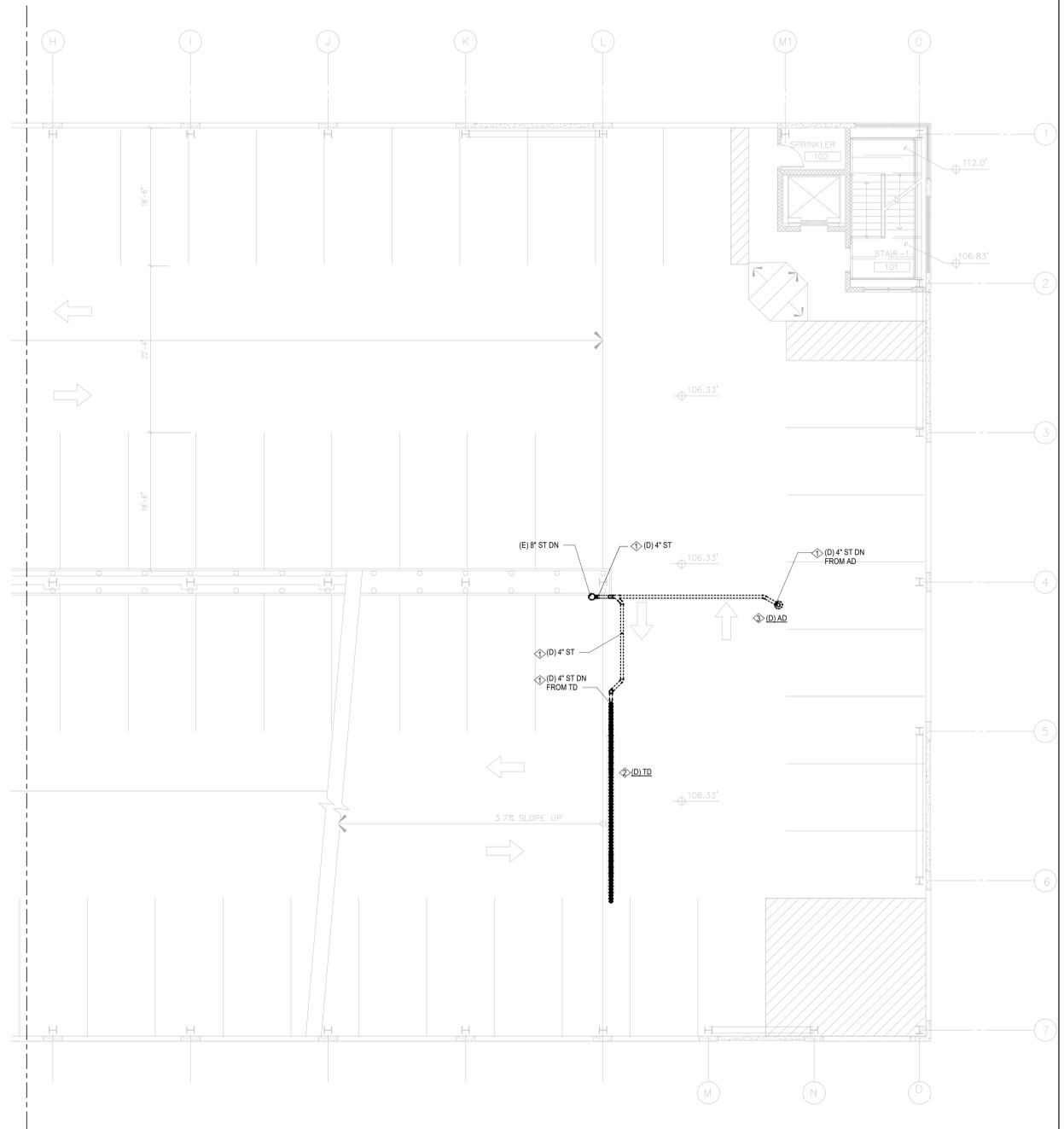
1. DISCONNECT AND REMOVE STORM DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO HORIZONTAL AND VERTICAL STORM PIPING, FITTINGS, COUPLINGS, HANGERS, SUPPORTS, CONNECTIONS TO STRUCTURE, AND ASSOCIATED SLEEVES.
2. DISCONNECT AND REMOVE TRENCH DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, GRATES AND CHANNELS.
3. DISCONNECT AND REMOVE AREA DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, AND SLEEVES.

GENERAL SHEET NOTES

1. REFER TO P101 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
2. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
3. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SVP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
10. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
11. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
12. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
13. PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
14. ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.



1 LEVEL 2-A PLUMBING DEMOLITION PLAN
1/8" = 1'-0"



2 LEVEL 2-B PLUMBING DEMOLITION PLAN
1/8" = 1'-0"

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Sheet Name:
LEVEL 2 PLUMBING DEMOLITION PLAN

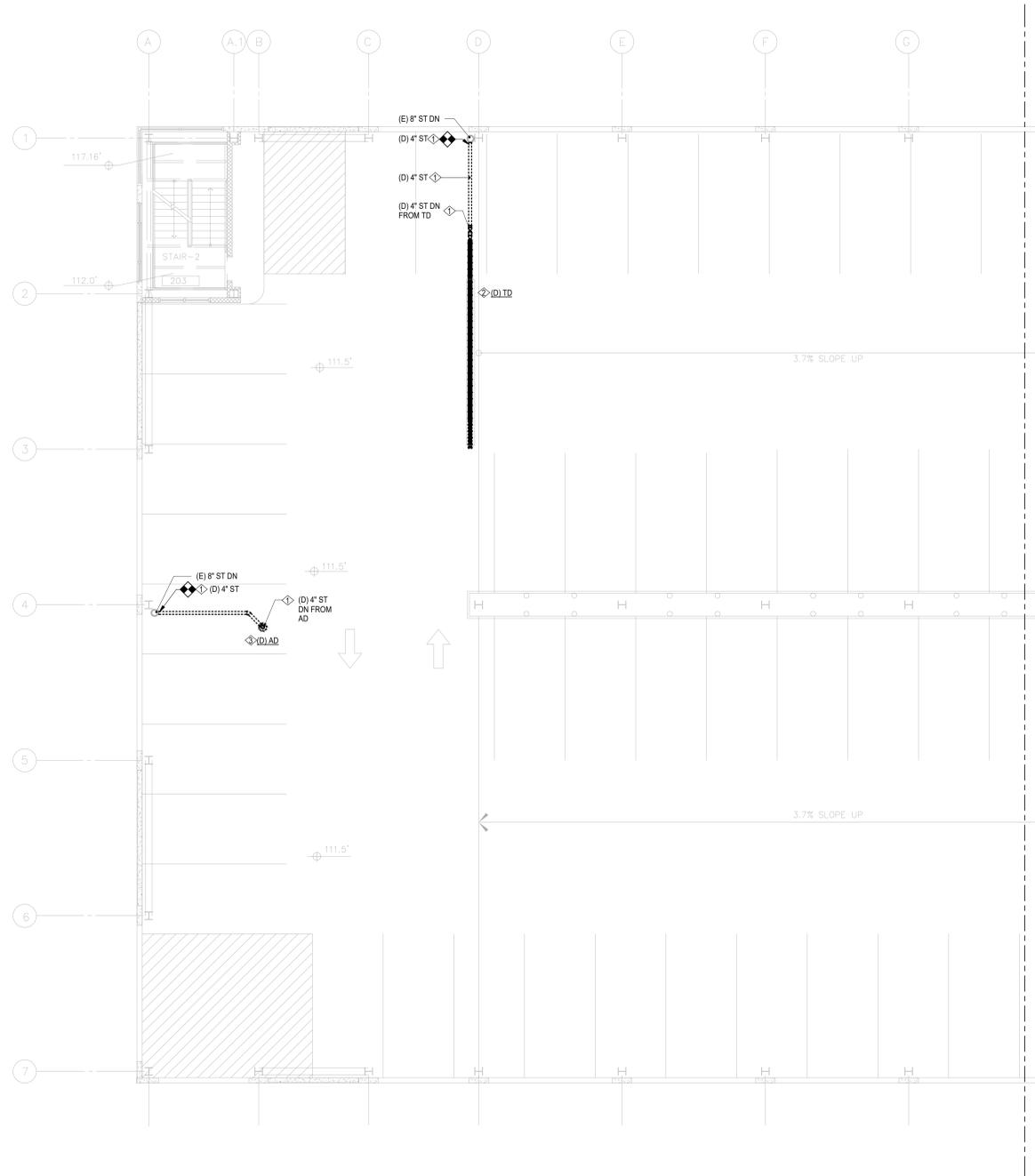
Sheet No:
P102
 SHEET 39 OF 58

KEYNOTES

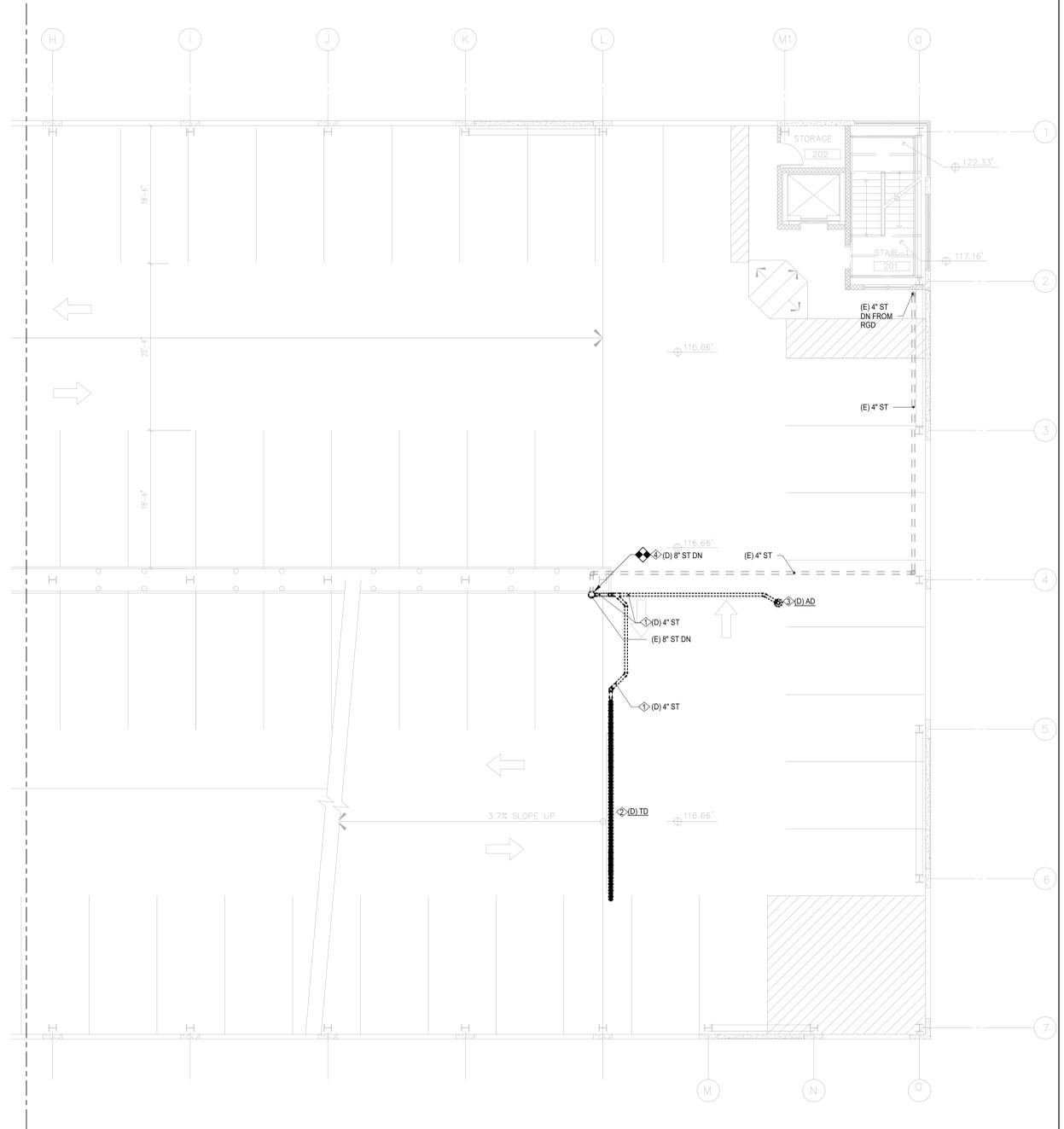
1. DISCONNECT AND REMOVE STORM DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO HORIZONTAL AND VERTICAL STORM PIPING, FITTINGS, COUPLINGS, HANGERS, SUPPORTS, CONNECTIONS TO STRUCTURE, AND ASSOCIATED SLEEVES.
2. DISCONNECT AND REMOVE TRENCH DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, GRATES AND CHANNELS.
3. DISCONNECT AND REMOVE AREA DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, AND SLEEVES.
4. DISCONNECT AND REMOVE VERTICAL STORM LEADER SEGMENT WITH FITTING THAT CONNECTS TO RD-3 AND TD-4 STORM DRAINAGE PIPES.

GENERAL SHEET NOTES

1. REFER TO P101 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
2. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
3. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SOP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
10. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
11. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
12. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
13. PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
14. ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.



2 LEVEL 3-A PLUMBING DEMOLITION PLAN
 1/8" = 1'-0"



1 LEVEL 3-B PLUMBING DEMOLITION PLAN
 1/8" = 1'-0"

No.	Date	Description
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 1065 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

ROBERT H. GOULD
 NJ PE 24GE0556100

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 Client:
UNION COUNTY AUTHORITY
 IMPROVEMENT PROJECT
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710
 Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
 Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/2025
 Drawn By: NL
 Checked By: RHG
 Sheet Name:
LEVEL 3 PLUMBING DEMOLITION PLAN

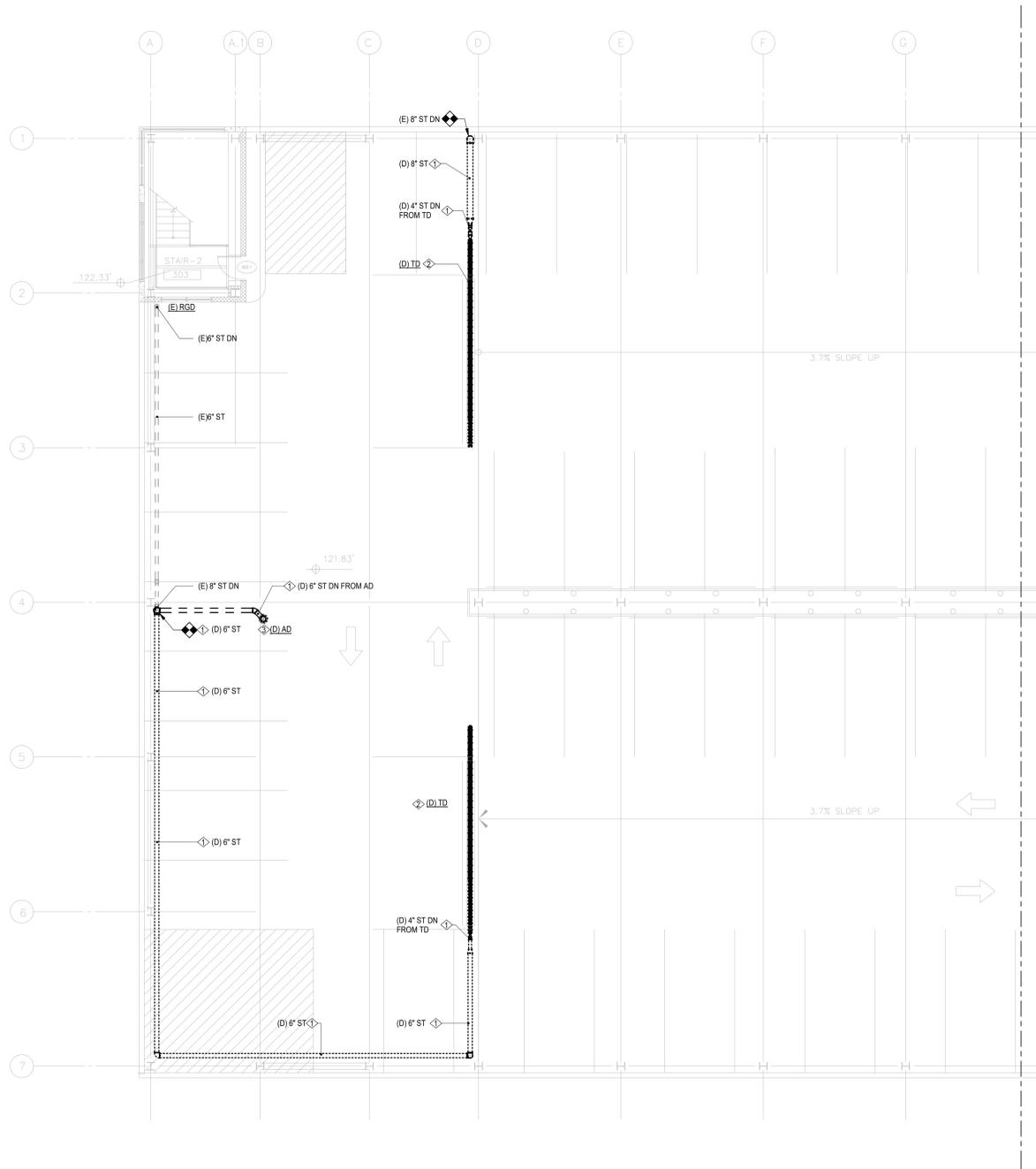
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KEYNOTES

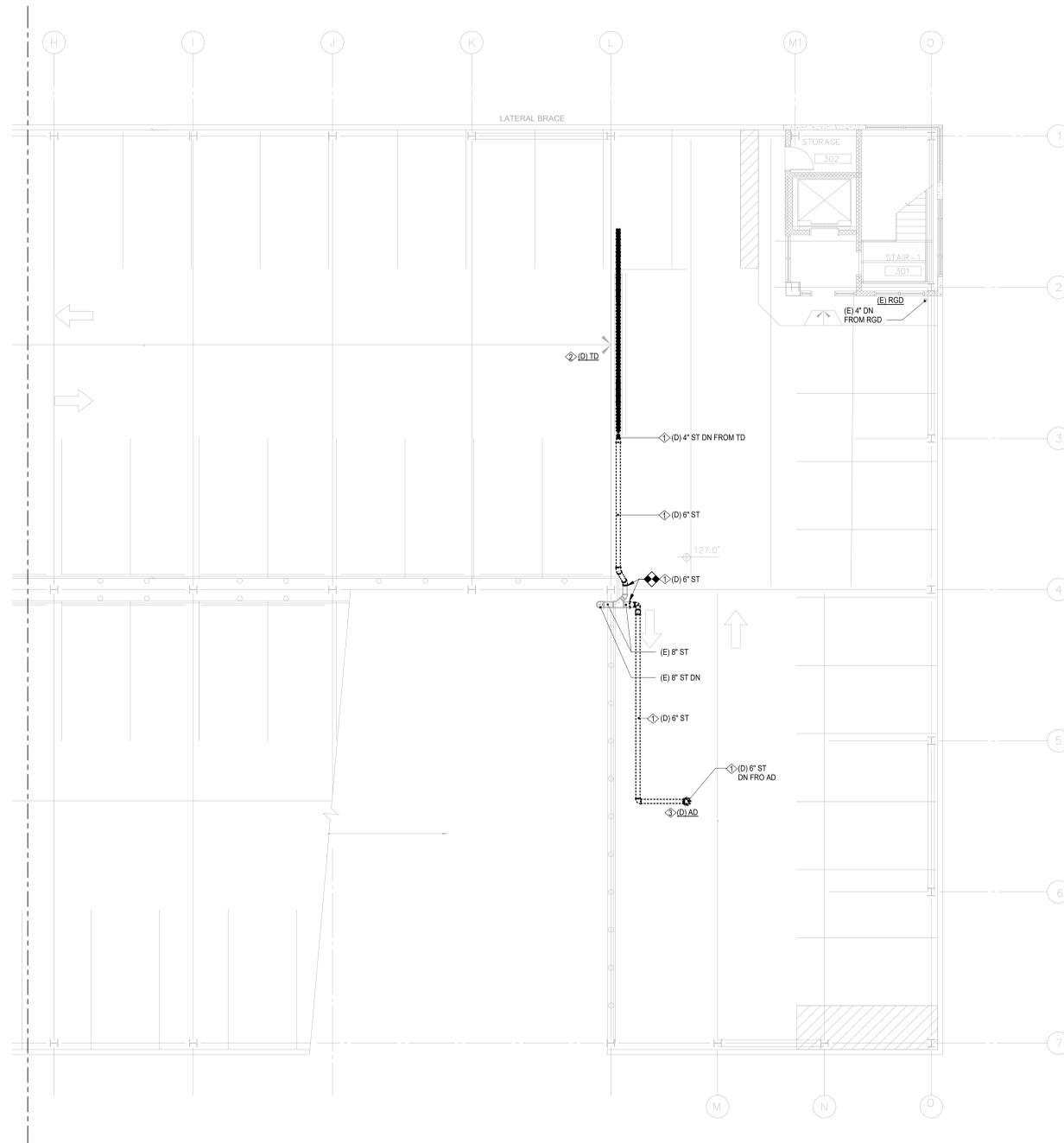
- 1 DISCONNECT AND REMOVE STORM DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO HORIZONTAL AND VERTICAL STORM PIPING, FITTINGS, COUPLINGS, HANGERS, SUPPORTS, CONNECTIONS TO STRUCTURE, AND ASSOCIATED SLEEVES.
- 2 DISCONNECT AND REMOVE TRENCH DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, GRATES AND CHANNELS.
- 3 DISCONNECT AND REMOVE AREA DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, AND SLEEVES.

GENERAL SHEET NOTES

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- 2 PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
- 3 CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
- 4 PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SVP UPON COMPLETION OF WORK.
- 5 PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS. COORDINATE WITH OTHER TRADES AND BUILDING.
- 6 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
- 7 ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
- 8 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
- 9 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
- 10 ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
- 11 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 12 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 13 PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
- 14 ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.



2 P104 LEVEL 4-A PLUMBING DEMOLITION PLAN
1/8" = 1'-0"



1 P104 LEVEL 4-B PLUMBING DEMOLITION PLAN
1/8" = 1'-0"

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T: 215.634.3400

Pennoni PENNONI ASSOCIATES INC.
1065 PATASAND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
NJ COA NO. GA28033300

ROBERT H. GOULD
NJ PE 24GE05550100



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Client:
**UNION COUNTY
IMPROVEMENT AUTHORITY**
10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 0720710

Project:
**GERRY B. GREEN PLAZA PARKING
GARAGE REPAIRS**

Block 246 / Lot 1
200 WEST 2ND STREET
PLAINFIELD, NJ
Drawing Information:
Project No: DIGAX25005
Date: 11/03/2025
Drawn By: NL
Checked By: RHG

Sheet Name:
**LEVEL 4 PLUMBING
DEMOLITION PLAN**

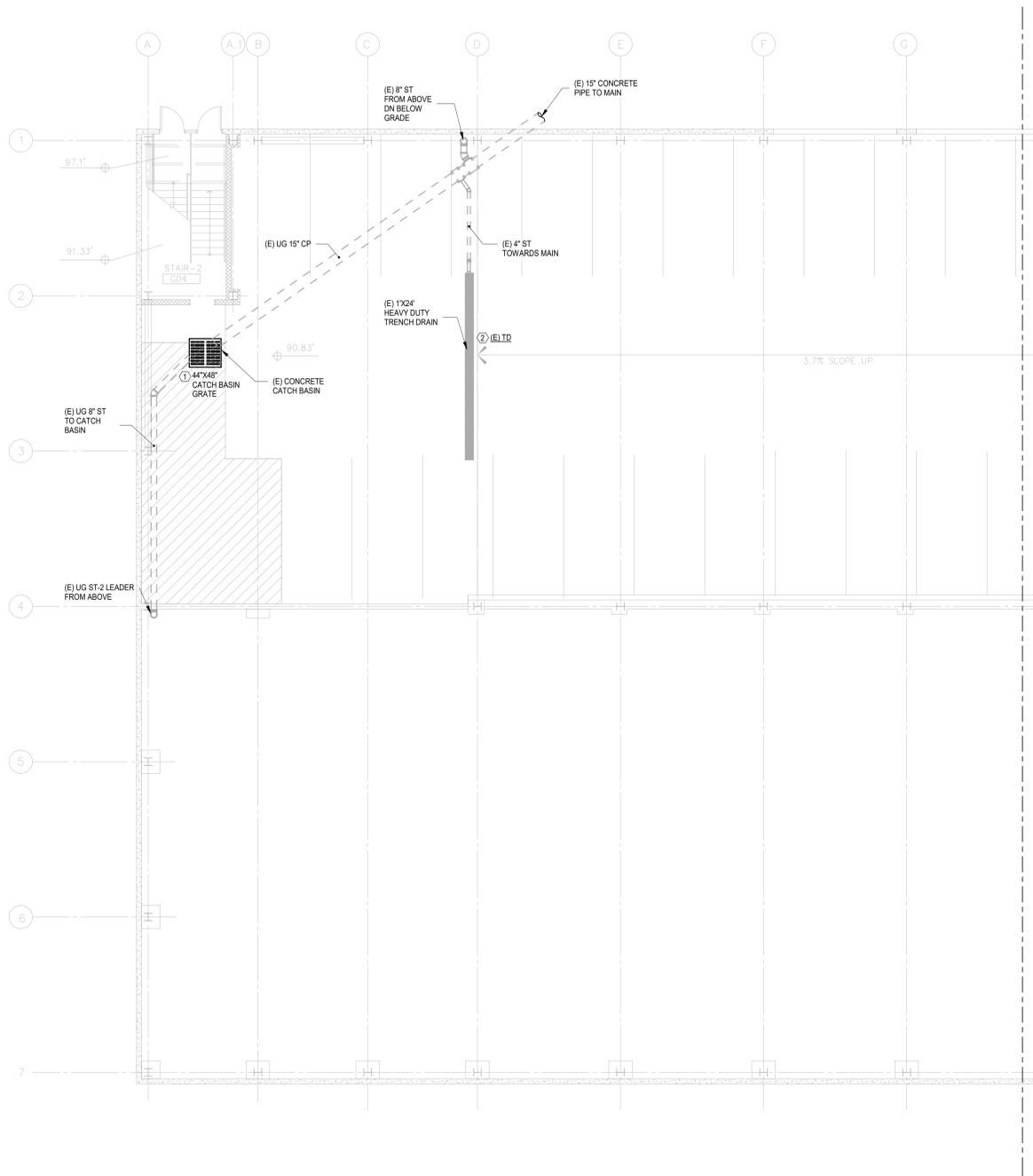
Sheet No:
P104
SHEET 41 OF 58

KEYNOTES

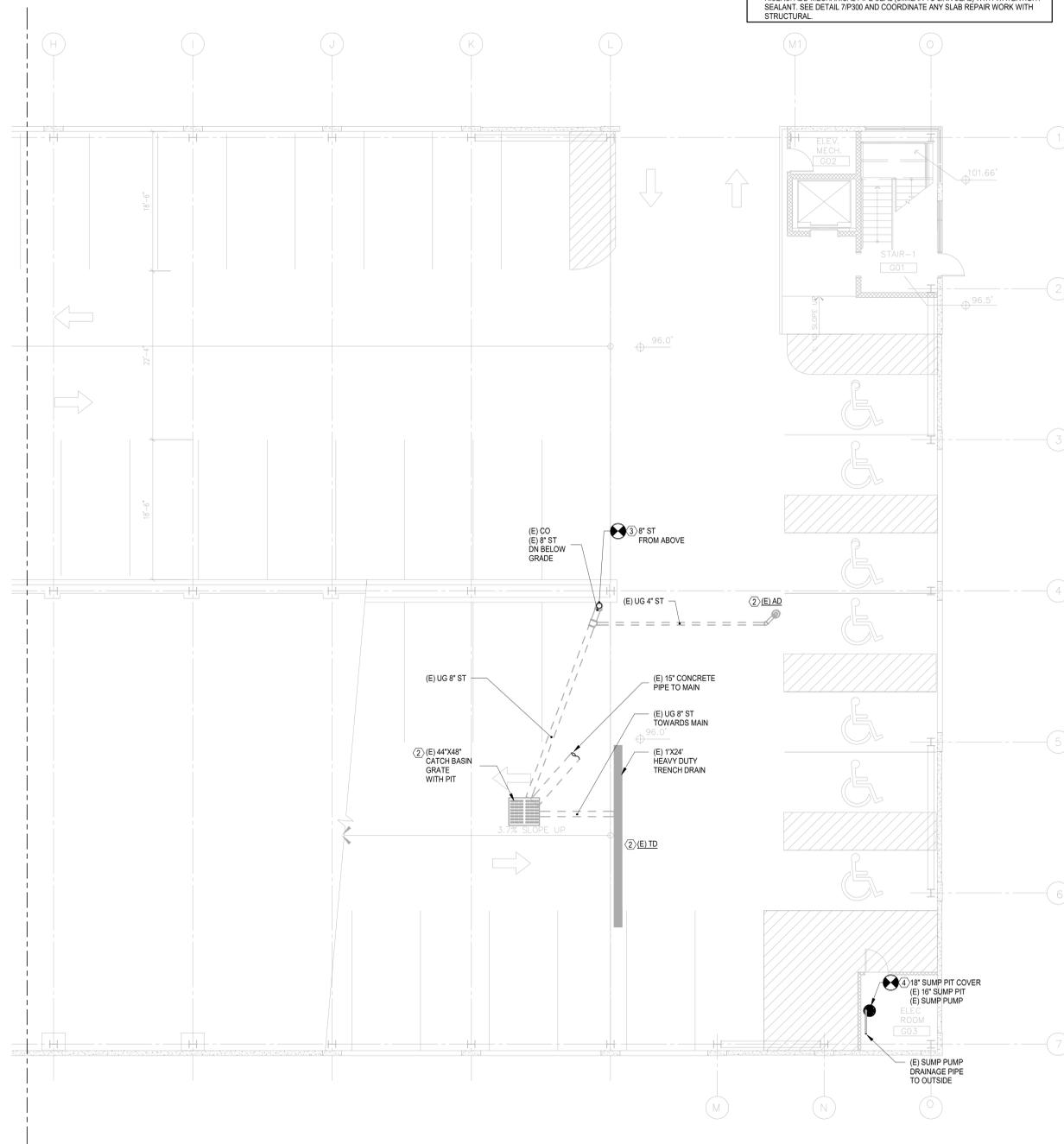
- 1 PROVIDE NEW EPOXY COATED CAST IRON CATCH BASIN GRATE TO MATCH EXISTING CONDITIONS. CLEAR DRAIN BASIN OF DEBRIS. CLEAR DOWNSTREAM PIPING WITH AUGER OR SNAKE TOOL.
- 2 PERFORM MAINTENANCE ON (E) DRAIN. REMOVE THE DRAIN GRATE. CLEAR DRAIN BASIN OF DEBRIS. CLEAR DOWNSTREAM PIPING WITH AUGER OR SNAKE TOOL. REMOVE RUST FROM EXPOSED SURFACES AND GRATES. PAINT THE EXISTING GRATE WITH TWO-PART EPOXY MASTIC PROTECTIVE COATING. REINSTALL EXISTING DRAIN GRATE.
- 3 PROVIDE NEW VERTICAL STORM LEADER SEGMENT FROM LEVEL ABOVE TO THE CLEANOUT.
- 4 PROVIDE NEW 18" HEAVY-GAUGE STEEL CIRCULAR COVER FOR EXISTING 16" DIAMETER SUMP PIT. FABRICATED FROM 1/4" MINIMUM THICKNESS GALVANIZED STEEL PLATE OR APPROVED EQUAL. PROVIDE CUTOUT OR NOTCHED OPENING TO ACCOMMODATE EXISTING DISCHARGE PIPE. SECURE COVER TO PREVENT DISPLACEMENT.

GENERAL SHEET NOTES

- 1 REFER TO P101 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
- 2 PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
- 3 CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
- 4 PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SVP UPON COMPLETION OF WORK.
- 5 PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS AND FUNCTIONALITY OF THE EXISTING STORM DRAINAGE SYSTEM. COORDINATE WITH OTHER TRADES AND BUILDING.
- 6 ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
- 7 ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
- 8 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
- 9 ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
- 10 ALL SANITARY AND STORM PIPING OF 3" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
- 11 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 12 REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
- 13 PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
- 14 ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST IRON PIPING.
- 15 INSPECT ALL THROUGH-FLOOR PENETRATIONS OF ALL PLUMBING PIPING INCLUDING BUT NOT LIMITED TO RAINWATER CONDUITORS AND FIRE WATER RISERS. ADD MECHANICAL PIPE SEAL (SIMILAR TO LINK SEAL) WITH WATERTIGHT SEALANT. SEE DETAIL 7/P300 AND COORDINATE ANY SLAB REPAIR WORK WITH STRUCTURAL.



2 LEVEL 1-A PLUMBING PROPOSED PLAN
P201 1/8" = 1'-0"



1 LEVEL 1-B PLUMBING PROPOSED PLAN
P201 1/8" = 1'-0"

No.	Date	Description
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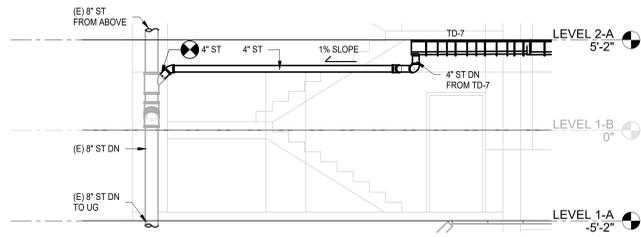
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 NJ PE 24GE0556100

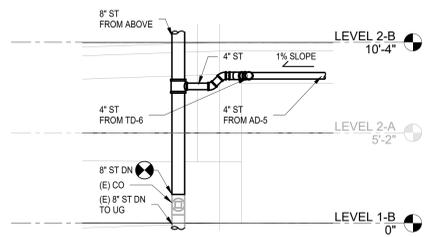
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 Client:
UNION COUNTY AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabethtown, NJ 0720710
 Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS
 Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/2025
 Drawn By: NL
 Checked By: RHG
 Sheet Name:
LEVEL 1 PLUMBING PLAN

Sheet No:
P201
 SHEET 42 OF 58

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 Autodesk Docs://316A93E0D5 - Jerry B Green Plaza Parking Structure/DIGAX25005 - JERRY B GREEN PLAZA PARKING STRUCTURE.R24.rvt



4 LEVEL 1-A - STORM RISER 3
1/4" = 1'-0"



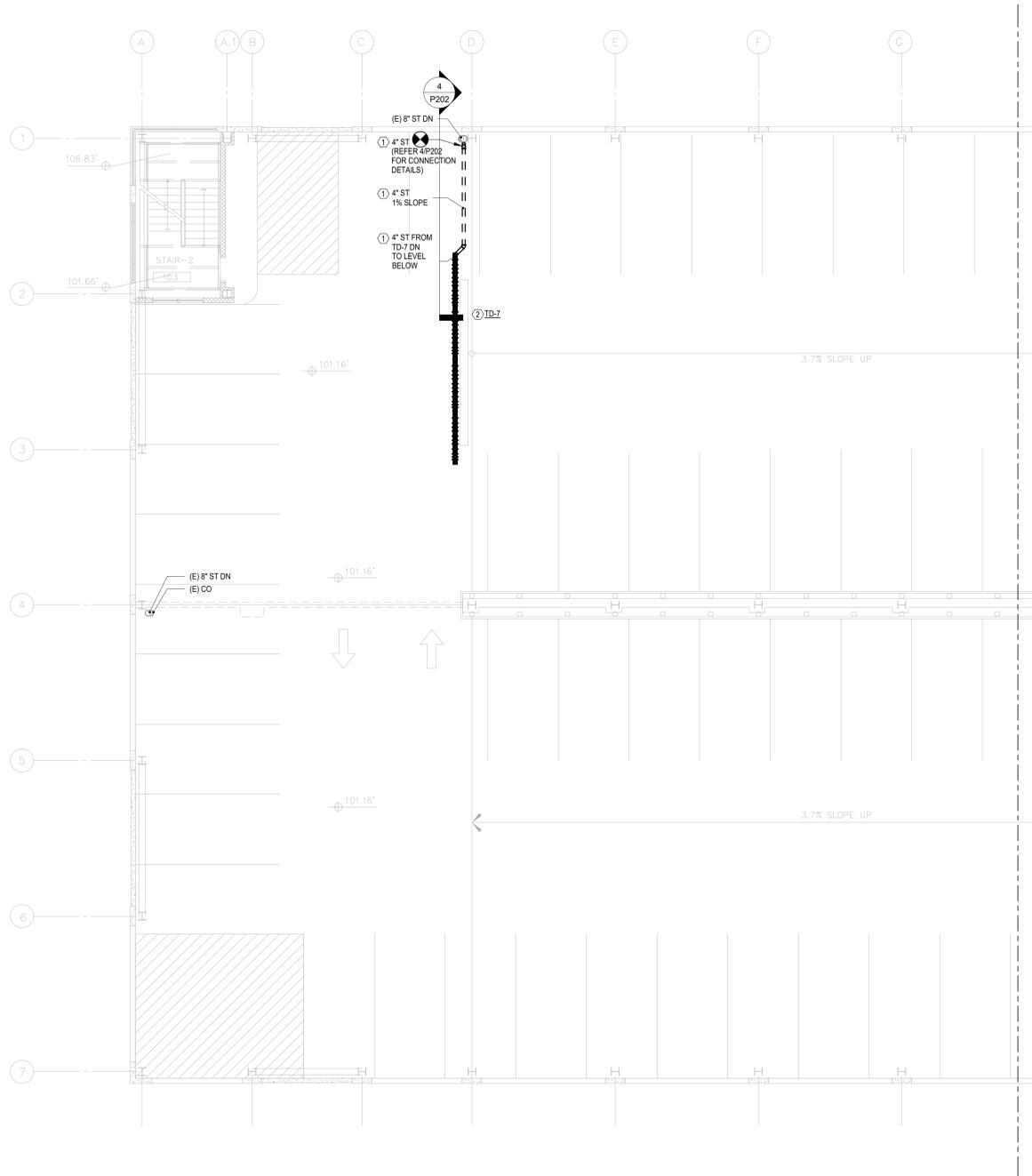
3 LEVEL 1-B - STORM RISER 1
1/4" = 1'-0"

KEYNOTES

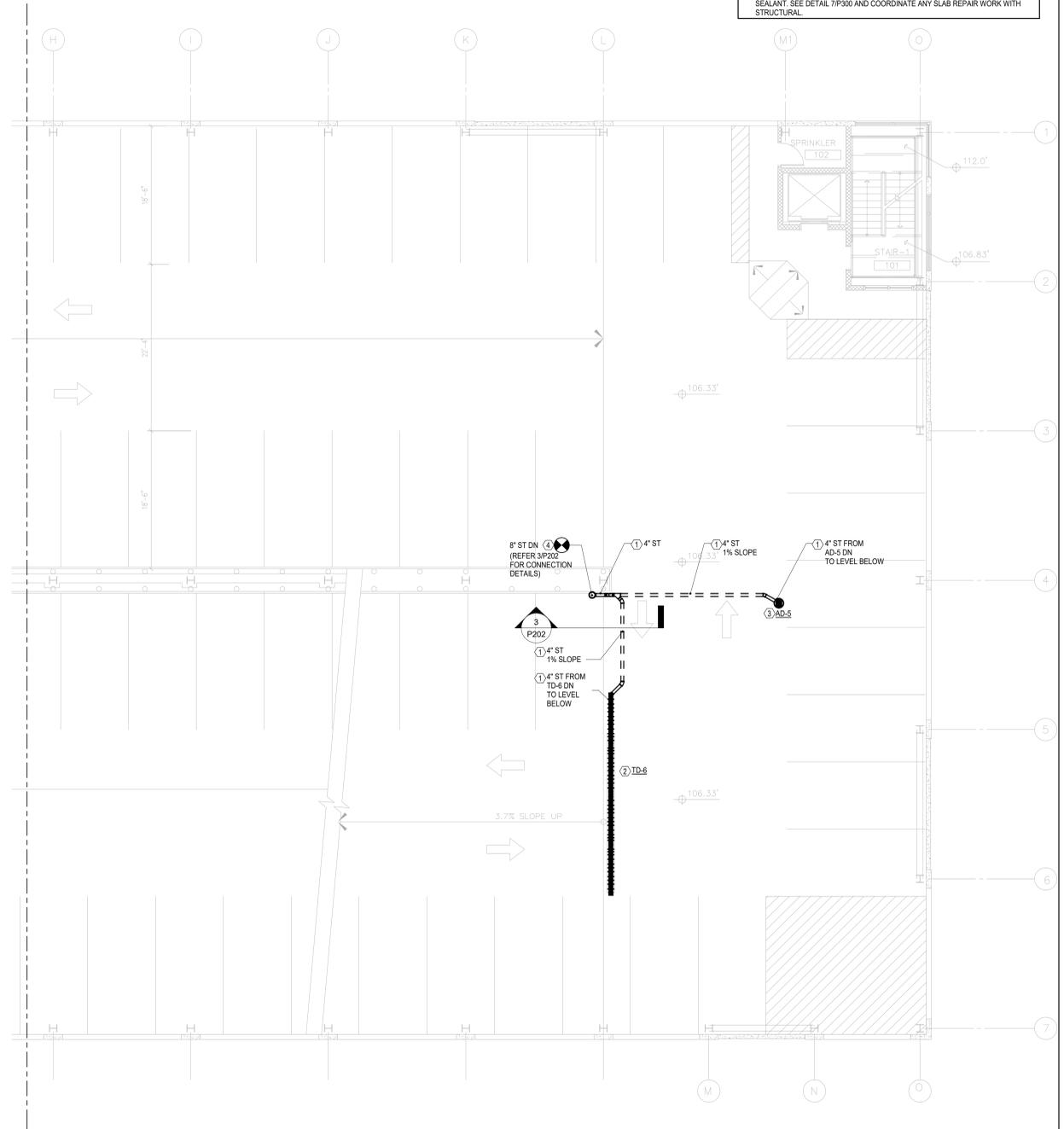
- 1 PROVIDE NEW SEGMENTS OF STORM DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO HORIZONTAL AND VERTICAL STORM PIPING, FITTINGS, COUPLINGS, HANGERS, SUPPORTS, CONNECTIONS TO STRUCTURE, AND ASSOCIATED BLESSES.
- 2 PROVIDE NEW TRENCH DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, GRATES AND CHANNELS. REFER TO DRAIN SCHEDULE FOR DETAILS.
- 3 PROVIDE NEW AREA DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, AND SLEEVES. REFER TO DRAIN SCHEDULE FOR DETAILS.
- 4 PROVIDE NEW VERTICAL STORM LEADER SEGMENT FROM THE FITTING THAT CONNECTS TO NEW AD-3 AND TD-4 STORM DRAINAGE PIPES DOWN TO LEVEL BELOW.

GENERAL SHEET NOTES

- 1 REFER TO P201 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
- 2 PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
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- 5 PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS AND FUNCTIONALITY OF THE EXISTING STORM DRAINAGE SYSTEM. COORDINATE WITH OTHER TRADES AND BUILDING.
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- 15 INSPECT ALL THROUGH-FLOOR PENETRATIONS OF ALL PLUMBING PIPING INCLUDING BUT NOT LIMITED TO RAINWATER CONDUCTORS AND FIRE WATER RISERS. ADD MECHANICAL PIPE SEAL (SIMILAR TO LINK SEAL) WITH WATER-TIGHT SEALANT. SEE DETAIL 7/P300 AND COORDINATE ANY SLAB REPAIR WORK WITH STRUCTURAL.



2 LEVEL 2-A PLUMBING PROPOSED PLAN
1/8" = 1'-0"



1 LEVEL 2-B PLUMBING PROPOSED PLAN
1/8" = 1'-0"

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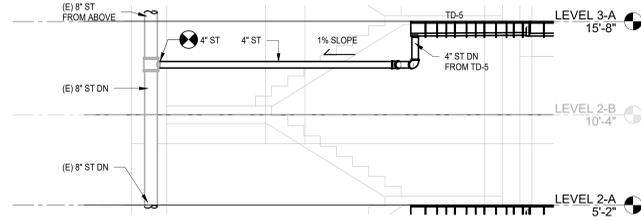
Project:
**GERRY B. GREEN PLAZA PARKING
 GARAGE REPAIRS**

Block 246 / Lot 1
 200 WEST 2ND STREET
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 Drawing Information:
 Project No: DIGAX25005
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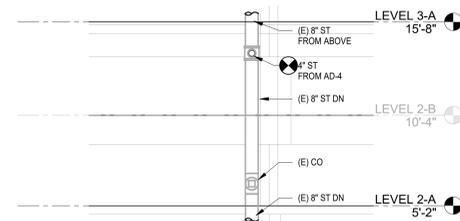
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LEVEL 2 PLUMBING PLAN

Sheet No:
P202
 SHEET 43 OF 58

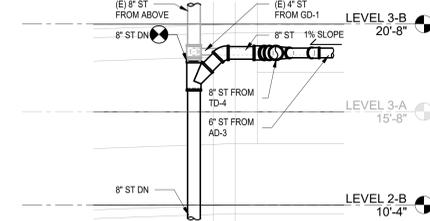
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5 LEVEL 2-A - STORM RISER 3
1/4" = 1'-0"



4 LEVEL 2-A - STORM RISER 2
1/4" = 1'-0"



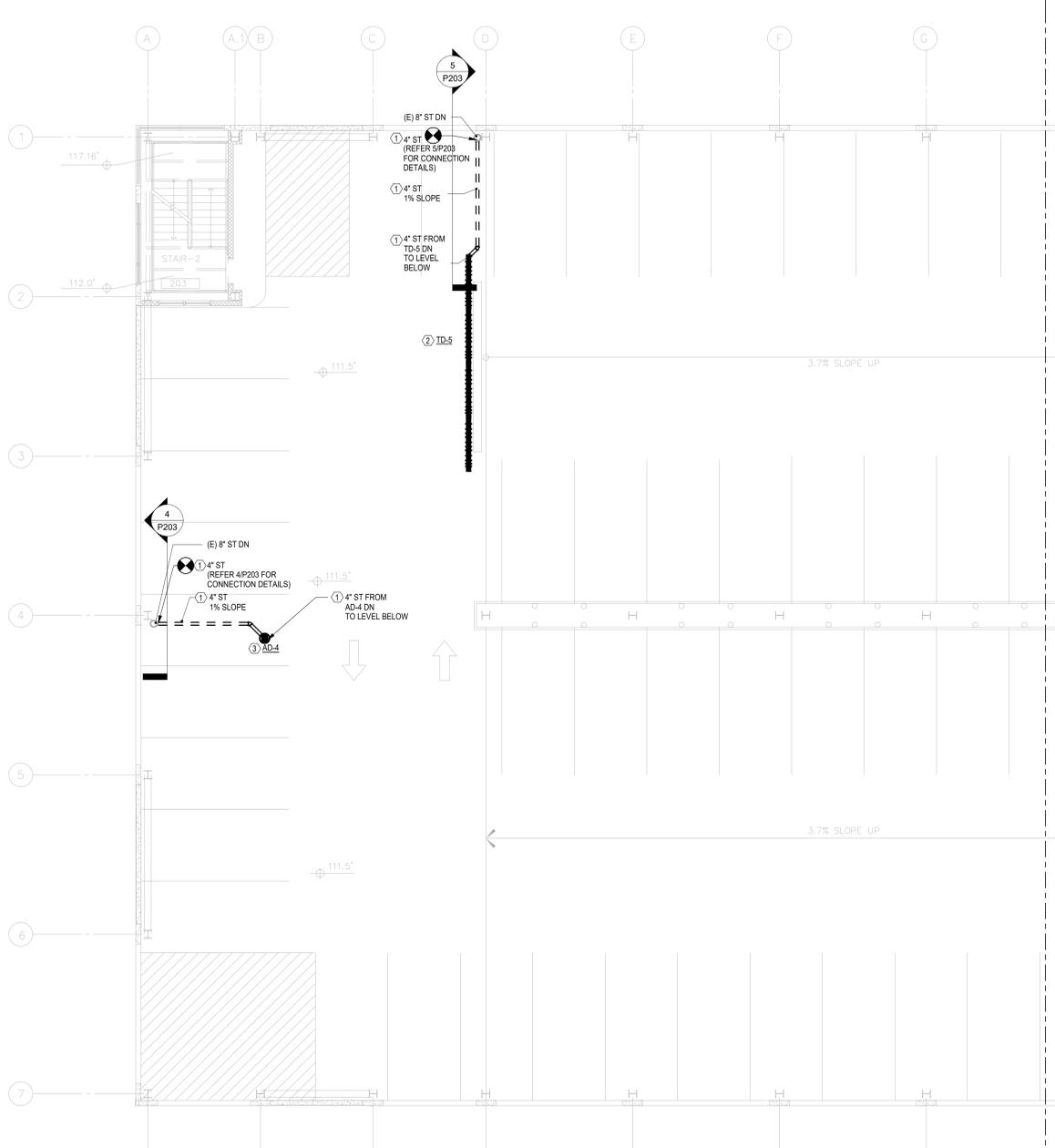
3 LEVEL 2-B - STORM RISER 1
1/4" = 1'-0"

KEYNOTES

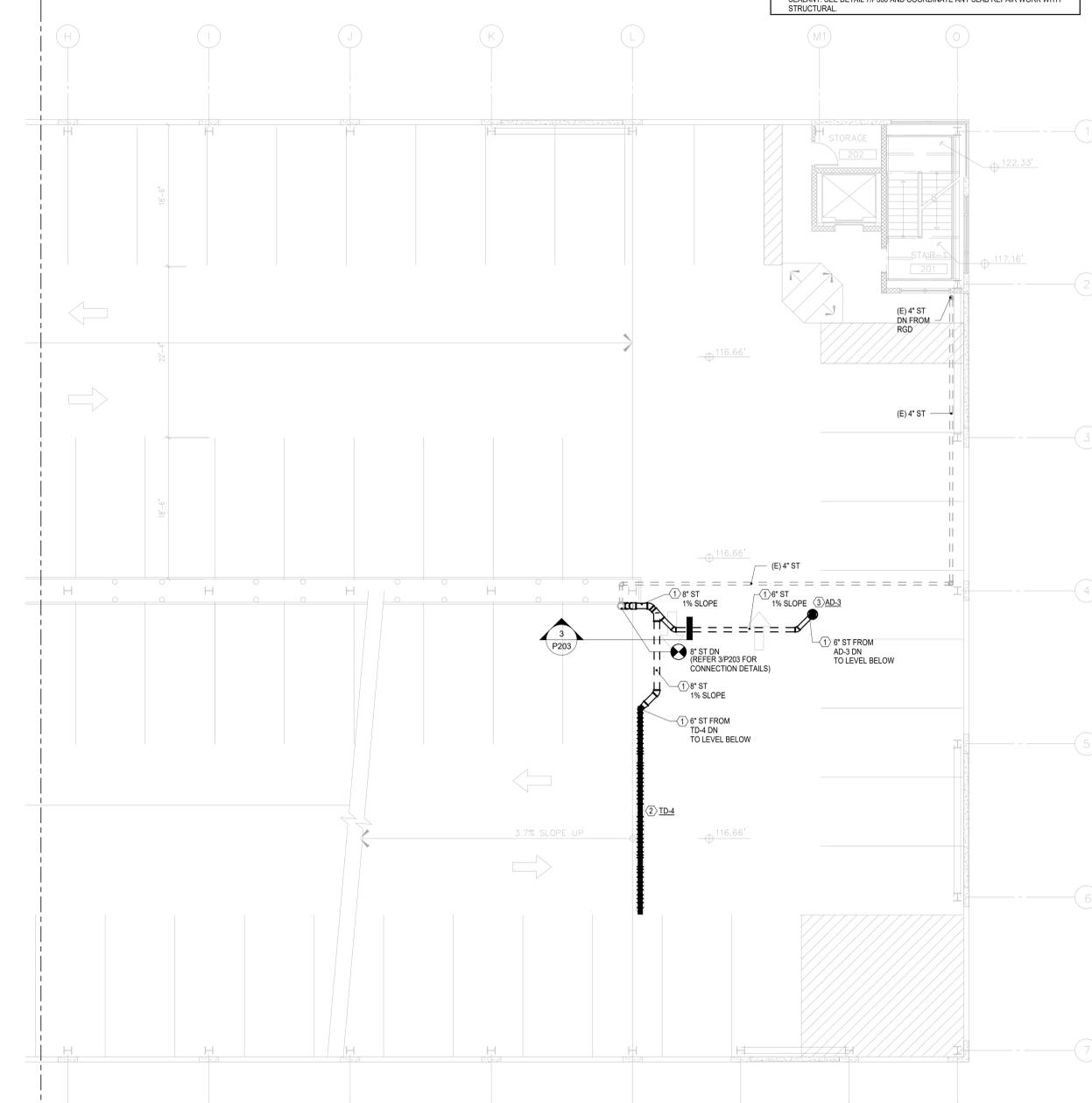
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- 13 PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
- 14 ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.
- 15 INSPECT ALL THROUGH-FLOOR PENETRATIONS OF ALL PLUMBING PIPING INCLUDING BUT NOT LIMITED TO RAINWATER CONDUITORS AND FIRE WATER RISERS. ADD MECHANICAL PIPE SEAL (SIMILAR TO LINK SEAL) WITH WATER-TIGHT SEALANT. SEE DETAIL 7/P300 AND COORDINATE ANY SLAB REPAIR WORK WITH STRUCTURAL.



2 LEVEL 3-A PLUMBING PROPOSED PLAN
1/8" = 1'-0"



1 LEVEL 3-B PLUMBING PROPOSED PLAN
1/8" = 1'-0"

0 01/07/2025 ISSUED FOR BID
 No. Date Description
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PENNONI ASSOCIATES INC.
 1065 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

ROBERT H. GOULD
 NJ PE 24CE05550100

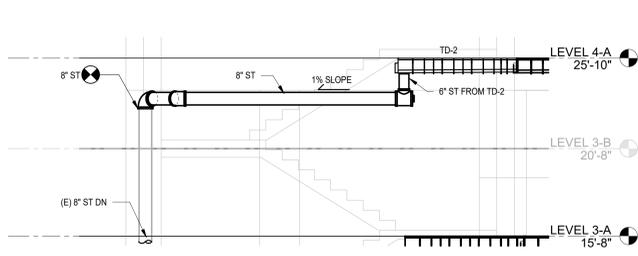
Client:
 UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710

Project:
 GERRY B. GREEN PLAZA PARKING
 GARAGE REPAIRS

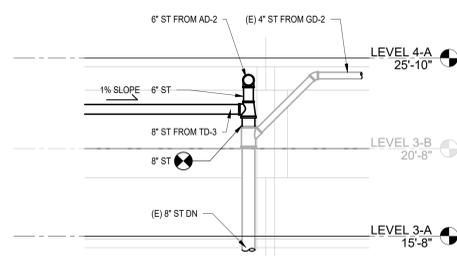
Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/2025
 Drawn By: NL
 Checked By: RHG

Sheet Name:
LEVEL 3 PLUMBING PLAN

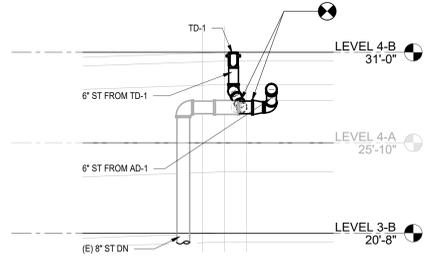
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 Autodesk Docs://17161635005 - Jerry B Green Plaza Parking Structure/DIGAX25005 - JERRY B GREEN PLAZA PARKING STRUCTURE-REN-PV2



5 LEVEL 3-A - STORM RISER 3
 1/4" = 1'-0"



4 LEVEL 3-A - STORM RISER 2
 1/4" = 1'-0"



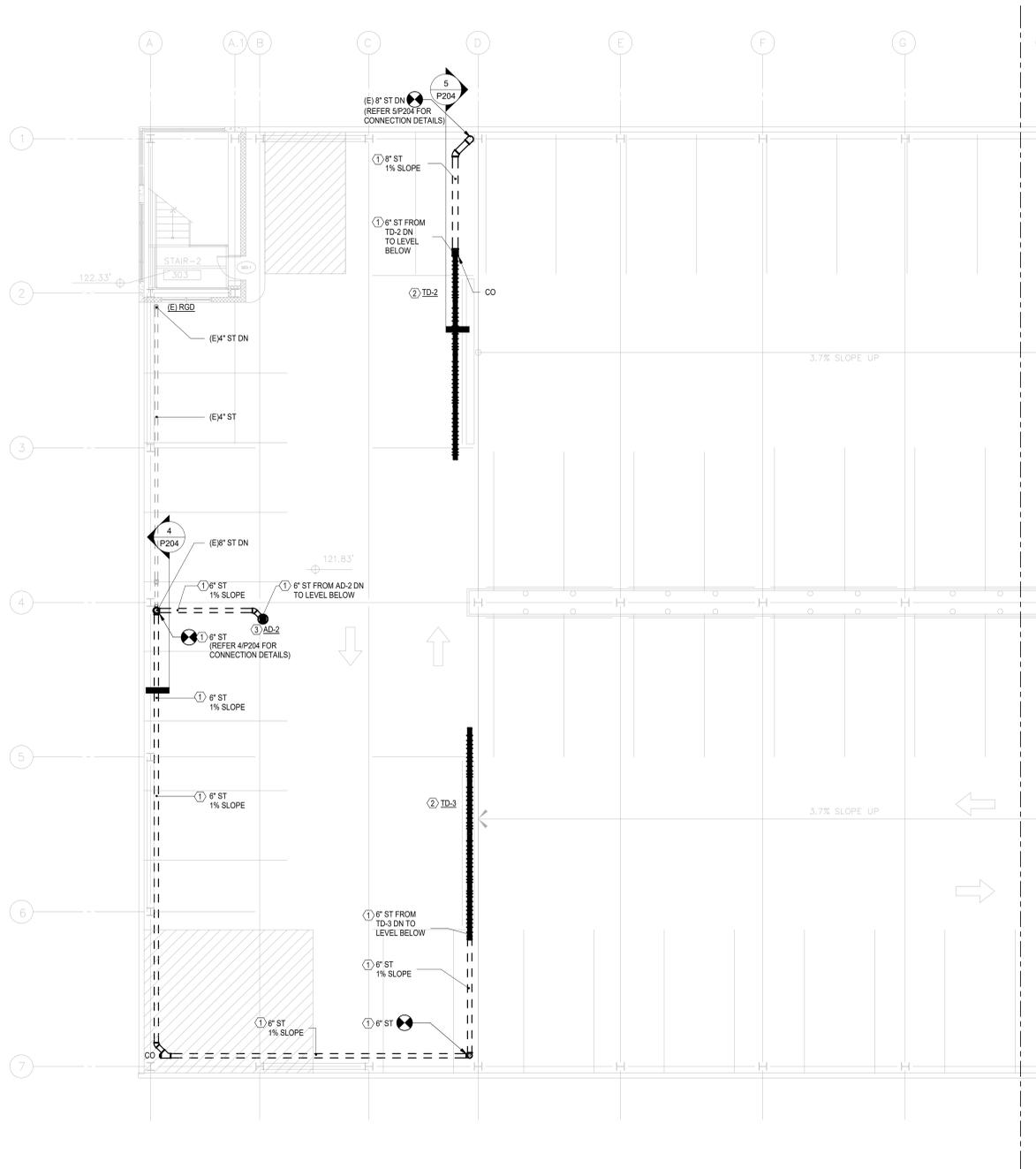
3 LEVEL 3-B - STORM RISER 1
 1/4" = 1'-0"

KEYNOTES

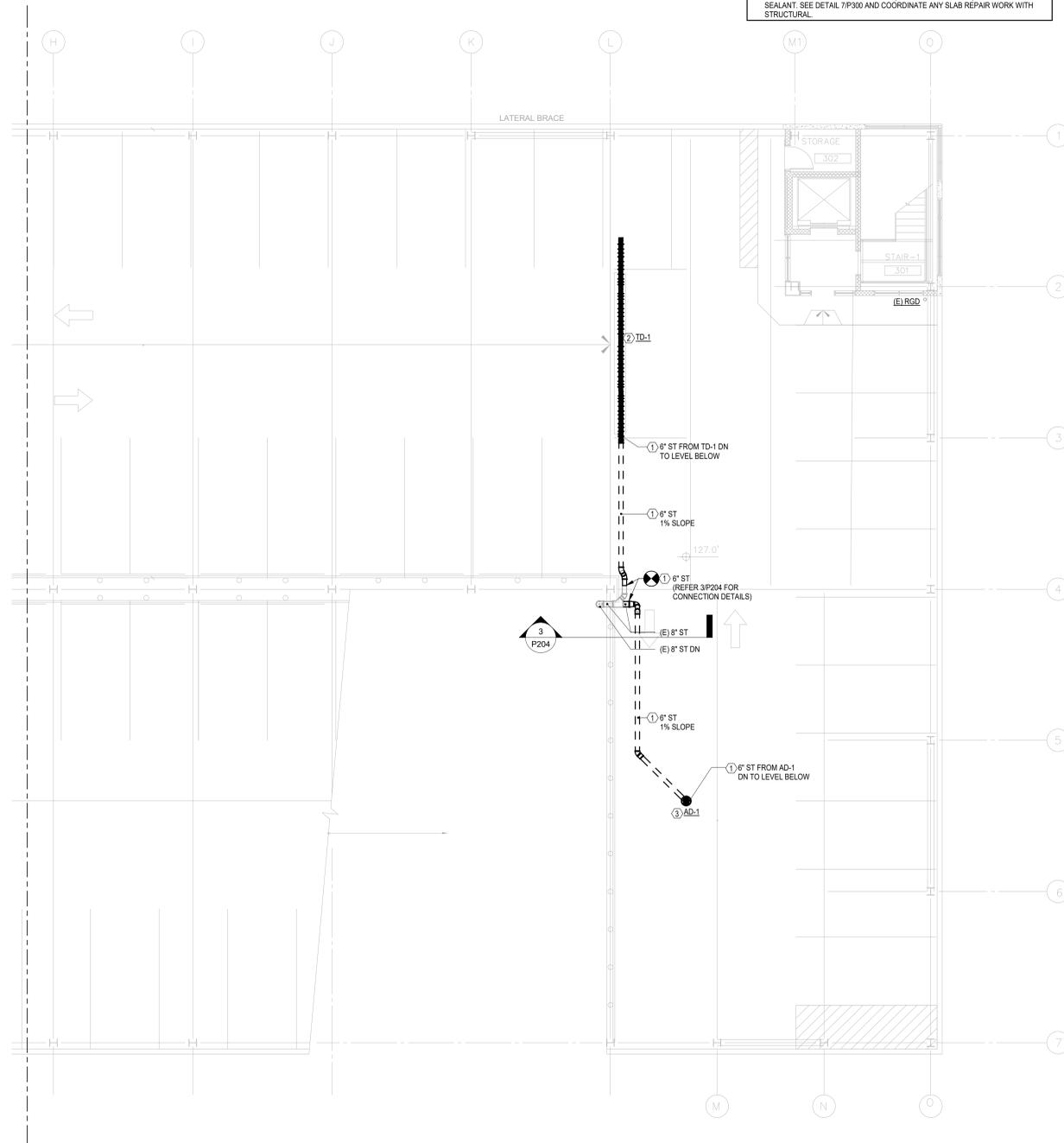
1. PROVIDE NEW SEGMENTS OF STORM DRAINAGE SYSTEM, INCLUDING BUT NOT LIMITED TO HORIZONTAL AND VERTICAL STORM PIPING, FITTINGS, COUPLINGS, HANGERS, SUPPORTS, CONNECTIONS TO STRUCTURE, AND ASSOCIATED SLEEVES.
2. PROVIDE NEW TRENCH DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, GRATES AND CHANNELS. REFER TO DRAIN SCHEDULE FOR DETAILS.
3. PROVIDE NEW AREA DRAIN AND ITS COMPONENTS INCLUDING BUT NOT LIMITED TO FITTINGS, STRUCTURAL SUPPORTS, AND SLEEVES. REFER TO DRAIN SCHEDULE FOR DETAILS.

GENERAL SHEET NOTES

1. REFER TO P001 FOR PLUMBING NOTES, LEGENDS AND ABBREVIATIONS. COORDINATE PLUMBING WORK WITH OTHER TRADES.
2. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK. SHOP DRAWINGS SHALL CAPTURE ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION ELEMENTS OF THE AREA.
3. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION OF EXISTING BELOW GRADE WASTE PIPING AND REFLECT ANY DEVIATION GREATER THAN 1'-0" FROM THIS PLAN ON THE AS-BUILT DRAWINGS.
4. PROVIDE AS BUILT AUTOCAD DRAWINGS TO THE SGP UPON COMPLETION OF WORK.
5. PHASE CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS AND FUNCTIONALITY OF THE EXISTING STORM DRAINAGE SYSTEM. COORDINATE WITH OTHER TRADES AND BUILDING.
6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND SHALL MAINTAIN ALL CLEARANCES (INSTALLATION AND MAINTENANCE) AS NOTED WITHIN THE WRITTEN INSTRUCTIONS.
7. ALL PENETRATIONS OF FIRE RATED CONSTRUCTION SHALL MAINTAIN THE FIRE RATING OF THE ASSEMBLY AS PER THE INTERNATIONAL BUILDING CODE.
8. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR GREATER SHALL BE PITCHED AT 1/8" SLOPE UNLESS OTHERWISE NOTED.
9. ALL SANITARY AND STORM PIPING OF 4" IN SIZE OR SMALLER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 75 FEET.
10. ALL SANITARY AND STORM PIPING OF 5" IN SIZE OR GREATER SHALL HAVE CLEANOUTS LOCATED AT INTERVALS OF NOT MORE THAN 100 FEET.
11. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
12. REPAIR WALL SURFACE AFTER INSTALLATION AND INSPECTION OF EACH PLUMBING FIXTURE AND PIPING INSTALLED.
13. PROVIDE PIPE HANGERS EVERY 10 FT OF HORIZONTAL LENGTH, AT ANY CHANGE OF DIRECTION, BRANCH CONNECTION, AND MAXIMUM 18 IN FROM EACH JOINT.
14. ALL EXISTING ABOVE-GRADE PVC DRAIN PIPING SHALL BE REMOVED AND REPLACED WITH NEW CAST-IRON PIPING.
15. INSPECT ALL THROUGH-FLOOR PENETRATIONS OF ALL PLUMBING PIPING INCLUDING BUT NOT LIMITED TO RAINWATER CONDUITORS AND FIRE WATER RISERS. ADD MECHANICAL PIPE SEAL (SIMILAR TO LINK SEAL) WITH WATER-TIGHT SEALANT. SEE DETAIL 7/P300 AND COORDINATE ANY SLAB REPAIR WORK WITH STRUCTURAL.



2 LEVEL 4-A PLUMBING PROPOSED PLAN
 1/8" = 1'-0"



1 LEVEL 4-B PLUMBING PROPOSED PLAN
 1/8" = 1'-0"

No.	Date	Description
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Pennoni PENNONI ASSOCIATES INC.
 1065 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

ROBERT H. GOULD
 NJ PE 2460555100



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Client:
 UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710

Project:
 GERRY B. GREEN PLAZA PARKING
 GARAGE REPAIRS

Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/2025
 Drawn By: NL
 Checked By: RHG

Sheet Name:
LEVEL 4 PLUMBING PLAN

Sheet No:
P204
 SHEET 45 OF 58

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PLUMBING FIXTURE SCHEDULE

NO.	DESCRIPTION	FIXTURES	MANUFACTURER	MODEL NO.	TYPE	DIMENSIONS				ACCESSORIES	NOTES
						LENGTH	WIDTH	HEIGHT	OUTLET		
TD-1	CAST DUCTILE IRON TRENCH...	ZURN	2886-DI-U6-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	6"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-2	CAST DUCTILE IRON TRENCH...	ZURN	2886-DI-U6-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	6"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-3	CAST DUCTILE IRON TRENCH DRAIN	ZURN	2886-DI-U6-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	6"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-4	CAST DUCTILE IRON TRENCH...	ZURN	2886-DI-U6-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	6"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-5	CAST DUCTILE IRON TRENCH...	ZURN	2886-DI-U4-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	4"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-6	CAST DUCTILE IRON TRENCH DRAIN	ZURN	2886-DI-U4-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	4"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
TD-7	CAST DUCTILE IRON TRENCH...	ZURN	2886-DI-U4-DB-BDE		TRENCH DRAIN	320"	6.25"	10.7"	4"	-	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
AD-1	HEAVY DUTY AREA DRAIN	ZURN	Z545-6NH		AREA DRAIN	-	-	7"	6"	16"	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
AD-2	HEAVY DUTY AREA DRAIN	ZURN	Z545-6NH		AREA DRAIN	-	-	7"	6"	16"	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
AD-3	HEAVY DUTY AREA DRAIN	ZURN	Z545-6NH		AREA DRAIN	-	-	7"	6"	16"	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
AD-4	HEAVY DUTY AREA DRAIN	ZURN	Z545-4NH		AREA DRAIN	-	-	7"	4"	16"	BOTTOM DRAIN OUTLET CONFIGURATION, BLACK EPOXY COATED GRATE - CLASS E.
AD-5	HEAVY DUTY AREA DRAIN	ZURN	Z545-4NH		AREA DRAIN	-	-	7"	4"	16"	NO HUB 16" DIAMETER AREA DRAIN, DURA-COATED CAST IRON BODY AND TOP

PIPE SCHEDULE - DRAINAGE PIPE

SERVICE	STORM	
LOCATION	ABOVE GROUND	
PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS
	STORM DRAINAGE - 2" & UP	ASTM A888 OR CISPI 301 HIGH PERFORMANCE CAST IRON SOIL PIPE - HUBLESS w/ STAINLESS STEEL CLAMPS
MAX. OPERATING PRESSURE SEAMLESS/ERW	-	-
PIPE MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS
	ALL SIZES	-
INSULATION TYPE	JACKET	NONE
	WEATHERPROOFING	NONE
PIPE VALVES	PIPE SIZE	ISOLATION
	-	-

NOTES:

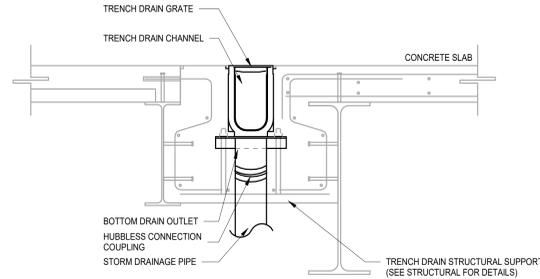
1. CONTRACTOR SHALL FOLLOW ALL REQUIRED LISTINGS & MANUFACTURERS INSTALLATION REQUIREMENTS IN ORDER TO...

2. STORM DRAINAGE PIPING SHALL BE HIGH PERFORMANCE CAST IRON TYPE PIPING MEETING THE FOLLOWING:

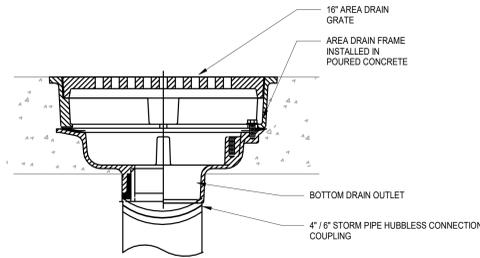
A. PIPE COATING: CHEMICALLY DEPOSITED ZINC-PHOSPHATE PRETREATMENT LAYER FOLLOWED BY AN ELECTRICALLY DEPOSITED, HIGH-PERFORMANCE CATHODIC EPOXY COATING, AND FINALLY AN ELECTRICALLY DEPOSITED, HIGH PERFORMANCE ANODIC EPOXY TOP COAT.

B. FITTING COATING: CHEMICALLY DEPOSITED ZINC-PHOSPHATE PRETREATMENT LAYER FOLLOWED BY AN ELECTRICALLY DEPOSITED, HIGH-PERFORMANCE CATHODIC EPOXY COATING, AND FINALLY AN EPOXY ACRYLIC POWDER TOP COAT.

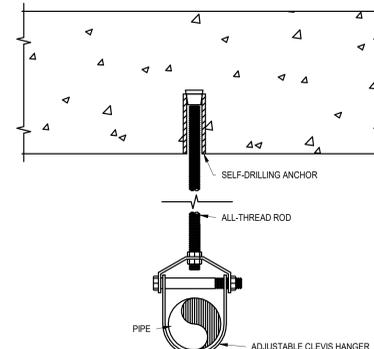
C. PIPE AND FITTING COATINGS MUST PASS THE FOLLOWING PERFORMANCE SPECIFICATIONS PER EN 877.



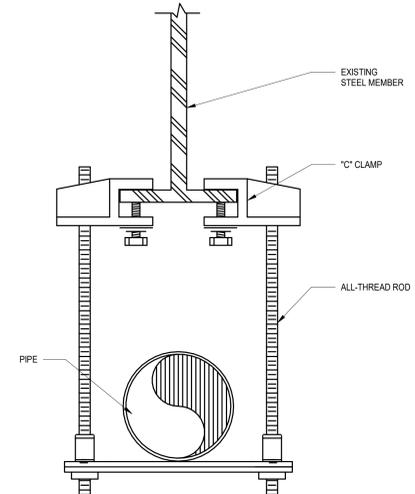
4 TRENCH DRAIN DETAIL
P300 NOT TO SCALE



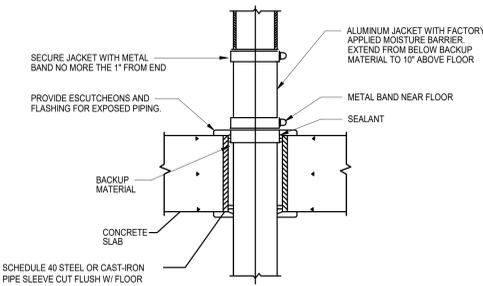
1 AREA DRAIN DETAIL
P300 NOT TO SCALE



5 PIPE SUPPORT DETAIL
P300 NOT TO SCALE



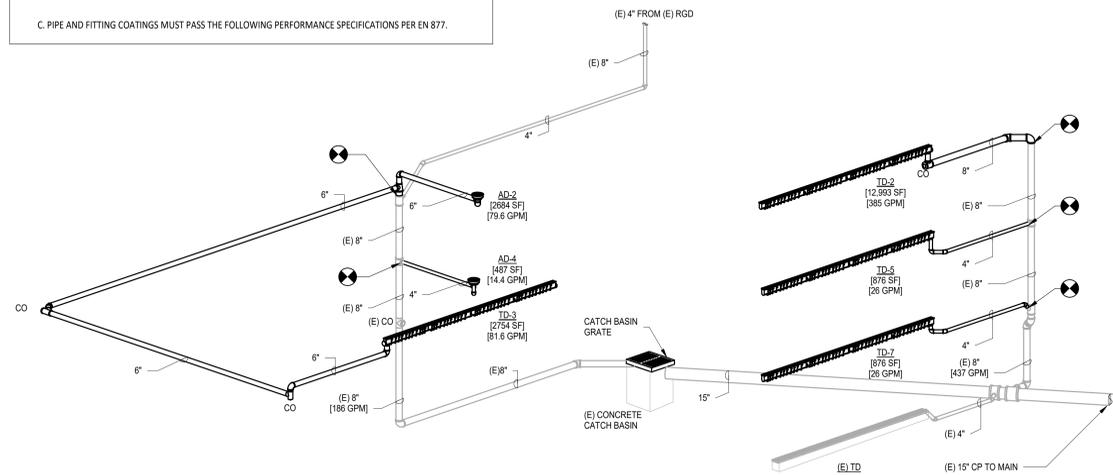
6 C-CLAMP PIPE HANGER
P300 NOT TO SCALE



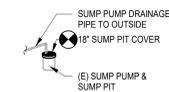
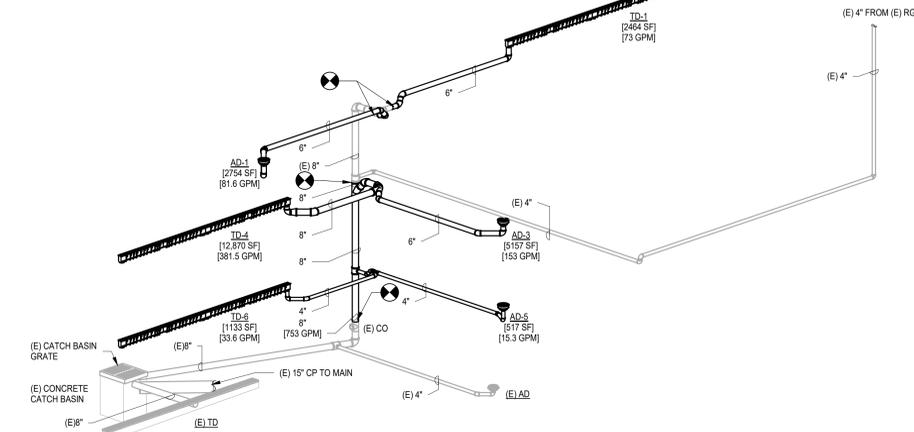
NOTES:

1. WHERE NOT FEASIBLE TO INSTALL FULL MECHANICAL SEAL SLEEVE OR PIPE SLEEVE, PROVIDE WATER-TIGHT SEALANT AND ESCUTCHEONS OR FLASHING.

7 PIPE PENETRATION-4
P300 NOT TO SCALE



3 STORM DRAINAGE RISER - 3D VIEW
P300



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PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
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ROBERT H. GOULD
NJ PE 24CE0556100



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10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 0720710

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS

Block 246 / Lot 1
200 WEST 2ND STREET
PLAINFIELD, NJ
Drawing Information:
Project No: DIGAX25005
Date: 11/03/2025
Drawn By: NL
Checked By: RHG

Sheet Name:
PLUMBING DIAGRAMS, SCHEDULES & DETAILS

Sheet No:
P300
SHEET 46 OF 58

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GENERAL NOTES:

- SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
- GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL DRAWINGS.
- PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.
- ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATAIN SAFETY TRAINING BY CLASS (IF APPLICABLE), BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OFFICERS REPRESENTATIVES.
- THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED HIMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.
- THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS. KNOWN ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL. THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
- VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETECT ALL UTILITIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS WORK PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS BEEN ADVISED OF ALL CLAIMS WHICH WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL CONTINUE THE ARCHITECT ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
- THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS TO THE BEST AVAILABLE STANDARDS AT THE SCALE INDICATED.
- LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS AT ALL CONDUIT LOCATIONS. EQUIPMENT DETERMINED USING APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT, WHERE PHYSICAL DIFFICULTIES OCCUR, CONSULT WITH ENGINEER AND PREPARE DETAILED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.
- SCHEDULE WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT THE OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL UTILITIES THAT AFFECT SYSTEMS AND PORTION OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH THE OWNER AND ALL OTHER CONTRACTORS.
- SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DULICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.
- BE RESPONSIBLE FOR WORKMENS IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
- BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
- PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED WORK.
- WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.
- BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK, SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
- ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED, AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
- COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. CONTRACTOR TO NOTIFY OWNER PRIOR TO STARTING WORK TO VERIFY COMPLIANCE WITH BOND AND WARRANTY OF EXISTING ROOF.
- RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
- SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT COMPLETE SHOP DRAWINGS AND CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA TO THE CONTRACTOR FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. CONTRACTOR SHALL SUBMIT ALL PIPING AND OUTCROWF WORK INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO APPROVED SHOP DRAWINGS THAT REQUIRE CHANGES SHALL BE REPLACED AT CONTRACTORS EXPENSE.
- SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. CHECK AND VERIFY ALL FIELD MEASUREMENTS.
- UPON COMPLETION OF THE CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT AT CONTRACTORS EXPENSE AND THREE (3) COMPLETE PAPER COPIES OF OPERATION AND MAINTENANCE MANUALS FOR THE ENTIRE PROJECT. THE METHOD OF COPIES CONTRACTORS EXPENSE. CONTRACTOR SHALL INSTRUCT THE OWNERS PERSONNEL WITH REGARD TO THE PROPER OPERATION OF ALL SYSTEMS TO THE SATISFACTION OF THE OWNER.
- NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
- UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED, ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIATED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER.
- PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). THESE DRAWINGS SHALL BE FORWARDED TO ALL CONTRACTORS. EACH CONTRACTOR SHALL SUBSEQUENTLY IN SUCCESSION DELINEATE HIS RESPECTIVE WORK ON THESE COORDINATION DRAWINGS. WHEN ALL WORK HAS BEEN PROPERLY SHOWN ON THE COORDINATION DRAWINGS, AND ALL CONTRACTORS AGREE THAT THEIR RESPECTIVE WORK CAN BE INSTALLED AND WILL PROPERLY FIT TOGETHER, THEY SHALL SO ACKNOWLEDGE BY ENDORSING THE DRAWINGS. ANY WORK DONE PRIOR TO COMPLETION OF ABOVE COORDINATION PROCESS FLOW IN CONFLICT SHALL BE REMOVED AND REPLACED AT THE RESPECTIVE CONTRACTORS EXPENSE.
- INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
- UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, SUBMIT TO THE ENGINEER IN WRITING A LETTER OF COMPLETION CERTIFYING THAT ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND ALL AS-BUILTS, MANUALS, ETC. HAVE BEEN SUBMITTED.
- BE RESPONSIBLE FOR ALL SLAB AND WALL OPENINGS, BEAM PENETRATIONS AND CORING DRILLING AS IT RELATES TO HIS WORK. PLUMBING CONTRACTOR SHALL SUBMIT SIZE AND LOCATION OF ALL SLAB AND WALL OPENINGS AND BEAM PENETRATIONS, AND COR DRILLING TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
- EFFECTIVELY PROTECT ALL MATERIAL AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE DAMAGED ITEMS AT NO ADDITIONAL COST TO OWNER.
- REFERENCED MANUFACTURERS DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.
- ALL WORK BEING INSTALLED IN AIR PLENUM SPACES MUST BE INSTALLED WITH PLENUM RATED MATERIAL. ANY EXISTING NON-PLENUM RATED PLUMBING PIPE LOCATED WITHIN THESE PLENUM RATED AREAS SHALL BE WRAPPED WITH A PLENUM RATED PIPE WRAPPING MATERIAL.

GENERAL ELECTRICAL NOTES:

- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK. IF THE CONTRACTOR OBSERVES ANY DISCREPANCIES TO THE DRAWINGS PRIOR TO THEIR BID THEY SHALL IDENTIFY SAME TO THE OWNER AND ENGINEER IN WRITTEN FORM WITH THEIR BID PROPOSAL, UNLESS IDENTIFIED PRIOR TO SUBMITTING THEIR BID.
- ELECTRICAL EQUIPMENT AND DEVICES INCLUDING ELECTRICAL CHARACTERISTICS SHOWN ON THE ELECTRICAL PLANS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES. BID SHALL INCLUDE ELECTRICAL ITEMS SHOWN BUT NOT PROVIDED BY OTHER TRADES. WHERE ELECTRICAL CHARACTERISTICS SHOWN BY OTHER TRADES DEVIATES FROM THOSE SHOWN ON THE ELECTRICAL PLANS, CONTRACTOR IS RESPONSIBLE FOR REQUESTING CLARIFICATION BY ENGINEER PRIOR TO SUBMITTING A BID.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NFPA 70 (NEC) AND OTHER ADOPTED CODES AND STANDARDS BY THE LOCAL JURISDICTION.
- GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250.
- UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL".
- ALTHOUGH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED, PROVIDE SUPPLEMENTARY OR MISCELLANEOUS ITEMS, APPURTENANCES, DEVICES, AND MATERIALS OBVIOUSLY NECESSARY FOR A SOUND, SECURE, AND COMPLETE INSTALLATION.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL BENDS, OFFSETS, DROPS AND RISSES OF RUNS. ALLOW IN PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATE WITH OTHER TRADES. MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGeways CLEAR. THE EXACT LOCATIONS OF DEVICES AND EQUIPMENT ARE SUBJECT TO THE APPROVAL OF THE OWNER, WHO RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES AT NO EXTRA COST.
- UPON COMPLETION OF THE WORK, THE ENTIRE WIRING SYSTEM SHALL BE FREE FROM GROUNDS, SHORT CIRCUITS, OPEN CIRCUITS, OVERLOADS AND IMPROPER VOLTAGES.
- SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK), NAILS, RAILS, PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. MC AND AC CABLES SHALL BE SECURED EVERY 6' AND WITHIN 12" FROM THE JUNCTION BOX, SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
- PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF ALL TRADES. OWNER WILL PAY FOR COST OF ENERGY. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.
- IN LOCATING BOXES AND OUTLETS TO AVOID INACCESSIBILITY, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILING AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
- PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3" OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY IS AT LEAST 1" FROM PIPE COVERS AND PARALLEL RUNS WHERE RACEWAY IS AT LEAST 18").
- CUT CONDUIT ENDS SQUARE, REAM SMOOTH, PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
- HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2" SLABS OR IN TERRAZZO FLOOR FINISH.
- ALL INTERIOR WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR METAL CLAD CABLE AND CONCEALED IN WALLS OR IN HUNG CEILING SPACE. WHERE WIRING CANNOT BE CONCEALED IN FINISHED AREAS, IT SHALL BE RUN EXPOSED IN A NEAT MANNER VIA SURFACE RACEWAY. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 1' LONG IN WHICH WIRING IS NOT INSTALLED, FURNISH NYLON PULP STRING. FOR ANY RACEWAY OVER 25' PROVIDE PULP STRING WITH CONDUIT MEASURING TAPE AND IDENTICAL DESIGNATION OF THE RACEWAY ON EACH END.
- VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON LOCK/ LATCH SIDE OF DOOR. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
- SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
- COVERS OF JUNCTION AND PULLBOXES SHALL BE ACCESSIBLE.
- PROVIDE PULLBOXES WHERE INDICATED, REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES. BOXES SHALL BE ACCESSIBLE AND GENERALLY NOT REQUIRED IN FINISHED SPACES, WHERE NECESSARY, REVERTURE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
- EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100' AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES. THE PULLBOX SHALL BE INSTALLED EVERY 270' OF TOTAL CONDUIT TURNS.
- ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
- CONNECT CONDUIT TO MOTOR TERMINAL BOXES WITH FLEXIBLE CONDUIT OF MINIMUM 1/8" MAXIMUM 6' LENGTH. PROVIDE SUFFICIENT WIRING SLACK AT EACH END OF TERMINATION. DO NOT TERMINATE IN OR FASTER RACEWAYS TO MOTOR FOUNDATION.
- ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- PROVIDE 2 #14AWG WIRING FOR INDICATING PILOT LIGHT FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
- PULL NO THERMOPLASTIC WIRES AT AMBIENT TEMPERATURES LOWER THAN 32°F (0°C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
- PROVIDE SEPARATE SYSTEMS AND ENCLOSURES FOR 208/120V AND 480/277V POWER AND CONTROL WIRING AND SEPARATE SYSTEMS FOR EMERGENCY AND NORMAL POWER. THE EMERGENCY AND NORMAL SYSTEMS SHALL NOT BE INSTALLED IN THE SAME RACEWAYS, ENCLOSURES, JUNCTION BOXES, PULLBOXES, TERMINATION CABINETS, EXCEPT IN EQUIPMENT ENCLOSURES DESIGNED TO ACCEPT BOTH SYSTEMS SUCH AS AUTOMATIC TRANSFER SWITCH OR EMERGENCY LIGHTING.
- ALL PENETRATIONS THROUGH CONCRETE STRUCTURAL FLOORING SHALL BE SCANNED WITH GROUND PENETRATING RADAR (GPR). SUBMIT FINDINGS TO ENGINEER FOR APPROVAL PRIOR TO PENETRATION.
- FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COPPER, 800 VOLT CONDUCTOR INSULATION TYPE THHN. THE MINIMUM SIZE 800 VOLT CONDUCTOR SHALL BE #12 AWG FOR POWER AND LIGHTING BRANCH CIRCUIT WIRING. THE MINIMUM SIZE CONDUIT SHALL BE 3/4". ALL CIRCUIT WIRING SIZES #10 AWG OR LARGER SHALL BE STRANDED AND SMALLER CONDUCTORS SHALL BE SOLID. BRANCH CIRCUITS 10 TO 200 FEET IN LENGTH UTILIZING #12 AWG WIRE SHALL BE INCREASED TO #10 AWG TO THE CENTER OF THE CIRCUIT LOAD AND #12 WIRE TO THE REMAINING DEVICES BEYOND THE LOAD CENTER. ADJUST CABLE SIZES REQUIRED TO MAINTAIN VOLTAGE DROP.
- WHERE CONDUIT RUNS CROSS STRUCTURAL EXPANSION JOINTS, LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED TO TRANSITION CONDUIT SYSTEM FROM ONE STRUCTURAL SECTION TO THE OTHER.
- VERIFY THAT ANY ELECTRICAL DEVICE OR PRODUCT WHICH IS TO BE RELOCATED OR REUSED IS IN PROPER WORKING CONDITION IN ACCORDANCE WITH INSTRUCTIONS INCLUDED IN ITS LISTING OR LABELING. ANY DEVICE OR PRODUCT FOUND TO BE DEFECTIVE OR DAMAGED SHALL BE REPLACED WITH NEW.
- LABEL WITH PERMANENT MARKER ALL JUNCTION BOXES AND RECEPTACLE OUTLET BOXES WITH CIRCUIT NUMBER AND PANEL IDENTIFICATION. ALL FINISHED AREA OUTLET PLATES SHALL BE LABELED WITH LABEL TAPE.
- WIRE COLOR CODING: AS PER CODE, WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ALL ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE PROVIDED TO THE OWNER AT THE END OF THE PROJECT. THE METHOD OF COPIES CONTRACTORS EXPENSE. CONTRACTOR SHALL DOCUMENT IN A MANNER THAT IS READILY AVAILABLE OR PERMANENTLY POSTED AT EACH BRANCH CIRCUIT PANELBOARD.

480/277V - WYE SYSTEM: PHASES A = BROWN B = ORANGE C = YELLOW NEUTRAL = GRAY GROUNDING = GREEN WITH YELLOW STRIPES
208/120V - WYE SYSTEM: PHASES A = BLACK B = RED C = BLUE NEUTRAL = WHITE GROUNDING = GREEN
240/120V - DELTA SYSTEM WITH HIGH LEG: PHASES A = BLACK B (HIGH LEG) = ORANGE C = RED NEUTRAL = WHITE GROUNDING = GREEN
240/120 V SINGLE PHASE: PHASES A = BLACK B = RED NEUTRAL = WHITE GROUNDING = GREEN
DC SYSTEM: POSITIVE = RED NEGATIVE = WHITE NEGATIVE = BLACK

GENERAL DEMOLITION NOTES:

- INCLUDE IN BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OBTAINED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
- REMOVE AND/OR RELOCATE ALL EXISTING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
- DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH, AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.
- ALL EXISTING SYSTEMS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED AND CONCEALED BEHIND FINISHED SURFACES.
- ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS.
- NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. FOLLOW CLOSELY THE ARCHITECTS DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
- ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF IN A LEGAL MANNER BY THE CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
- INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. NOTIFICATION MUST BE GIVEN AT LEAST 5 DAYS PRIOR TO SHUT DOWN. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
- ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- PATCH AND PAINTING OF EXISTING WALLS TO REMAIN WHICH ARE AFFECTED BY ELECTRICAL DEMOLITION ARE TO BE COMPLETED UNDER GENERAL CONSTRUCTION SPECIFICATION.
- SURVEY AND RECORD THE CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING SOURCES OF POWER TO EQUIPMENT PRIOR TO FINAL REMOVAL.
- EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
- IF WORK REQUIRES THE INTERRUPTION FIRE ALARM AND FIRE PROTECTION SYSTEMS, ARRANGE WITH OWNER TO CONDUCT A FIRE WATCH WHILE THE SYSTEMS ARE OUT OF SERVICE. CONSULT WITH FIRE MARSHALL PRIOR TO FIRE WATCH.

Electrical Sheet Schedule	
0001	ELECTRICAL INDEX SHEET
0002	ELECTRICAL SPECIFICATIONS
0003	ELECTRICAL SPECIFICATIONS
E001	LEVEL 1 ELECTRICAL DEMOLITION PLAN
E102	LEVEL 2 ELECTRICAL DEMOLITION PLAN
E103	LEVEL 3 ELECTRICAL DEMOLITION PLAN
E104	LEVEL 4 ELECTRICAL DEMOLITION PLAN
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E500	ELECTRICAL SCHEDULES

GENERAL COMPLIANCE - NJ

DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HEREIN SHALL COMPLY WITH THE LATEST ADOPTED VERSIONS OF THE STATE OF NEW JERSEY CODES, LOCAL JURISDICTION, AND STANDARDS LISTED BELOW BUT NOT LIMITED TO:

IBC	2021 NEW JERSEY UCC BUILDING SUBCODE
ASHRAE 90.1	2019 NEW JERSEY COMMERCIAL ENERGY CODE
NEC, NFPA 70	2020 NEW JERSEY UCC ELECTRICAL SUBCODE
NFPA 72	2019 NEW JERSEY FIRE ALARM CODE
NFPA 110	2019 NEW JERSEY EMERGENCY AND STANDBY POWER CODE

ELECTRICAL ABBREVIATIONS

IP	1 POLE (3P, 3P, 4P, ETC.)	MCB	MAIN CIRCUIT BREAKER
A	AMPERE	MCC	MAIN CONTROL CENTER
AC	ABOVE COUNTER	MDC	MAIN DISTRIBUTION CENTER
ACLG	ABOVE CEILING	MDS	MAIN DISTRIBUTION PANEL
AD	AUTOMATIC DOOR OPENER	MFR	MANUFACTURER
AF	AMP FRAME	MFS	MAIN FUSED DISCONNECT SWITCH
AFB	ABOVE FINISHED FLOOR	MH	MANHOLE
AFG	ABOVE FINISHED GRADE	MIC	MICROPHONE
ARC	ARC FAULT CIRCUIT INTERRUPTER	MISC	MISCELLANEOUS
AHU	AIR HANDLING UNIT	MLO	MAIN LIGHTS ONLY
AL	ALUMINUM	MMS	MANUAL MOTOR STARTER
ALT	ALTERNATE	MOA	MULTIOUTLET ASSEMBLY
AMP	AMPLIFIER	MSP	MOTOR STARTER PANELBOARD
ANNU	ANNUNCIATOR	MSS	MAN SWITCHBOARD
APPROX	APPROXIMATELY	MSS	MOTOR STARTER SWITCH
AQ-STAT	AQUASTAT	MT	MOUNT
ARCH	ARCHITECT, ARCHITECTURAL	MT-C	EMERGENCY CONDUIT
AS	AMP SWITCH	MTS	MANUAL TRANSFER SWITCH
AT	AMP TRIP	MTR	MOTOR, MOTORIZED
ATS	AUTOMATIC TRANSFER SWITCH	N	NORMALLY CLOSED
AUT	AUTOMATIC	NEC	NATIONAL ELECTRICAL CODE
AV	AUXILIARY	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AVG	AUDIO VISUAL	NFPA	NON-FUSED SAFETY DISCONNECT SWITCH
AWG	AMERICAN WIRE GAUGE	NF	NOT IN CONTRACT
BATT	BATTERY	N.O.	NORMALLY OPEN
BLDG	BUILDING	NF	NORMAL POWER FACTOR
BMS	BUILDING MANAGEMENT SYSTEM	NC	NORMALLY CLOSED
CB	CABINET	NO	NORMALLY OPEN
CB	CATALOG	NP	NORMAL
CATV	CABLE TELEVISION	OC	ON CENTER
CBT	CIRCUIT BREAKER	OH	OVERHEAD
CCTV	CLOSED CIRCUIT TELEVISION	OH	OVERHEAD
CKT	CIRCUIT	PA	POSTAL ADDRESS
CLG	CEILING	PB	PULL BOX OR PUSHBUTTON
COMB	COMBINATION	PC	PEDESTAL
COMP	COMPRESSOR	PE	PEDESTAL
CONN	CONNECTION	PF	POWER FACTOR
CONST	CONSTRUCTION	PIV	PISTON INDICATING VALVE
CONT	CONTINUOUS OR CONTINUOUS	PL	PANEL POLE
CONTR	CONTRACTOR	PR	PAIR
CONV	CONVECTOR	PR	PAIR
CP	CIRCULATING PUMP	PR	PAIR
CRT	CATHODE-RAY TUBE	PR	PAIR
CT	CURRENT TRANSFORMER	PR	PAIR
CU	COPPER	PRV	POWER ROOF VENTILATOR
CJ	COPPER	PT	POTENTIAL TRANSFORMER
DCP	DOMESTIC WATER CIRCULATING PUMP	PC	POLYETHYLENE CHLORIDE (CONDUIT)
DEPT	DEPARTMENT	PWR	POWER
DET	DETAIL	QUAN	QUANTITY
DIS	DISCONNECT	RCPT	RECEPTACLE
DISC	DISTRIBUTION	REQD	REQUIRED
DOWN	DOWN	RMD	RIGID METAL CONDUIT
DPR	DAMP	RSC	RIGID STEEL CONDUIT
DS	SAFETY DISCONNECT SWITCH	RTU	ROOM TOP UNIT
DW	DRAWING	RTO	RETRACTABLE CONDUIT
DWG	DRAWING	SEC	SECONDARY
EC	ELECTRICAL CONTRACTOR	SHT	SHEET
ELEC	ELECTRICAL	SH	SINGLE LINE DIAGRAM
ELEV	ELEVATOR	SLD	SINGLE LINE DIAGRAM
EM	EMERGENCY LIGHTING UNIT	SN	SINGLE NEUTRAL
EM	EMERGENCY	SP	SURGE PROTECTIVE DEVICE SPECIFICATION
EM	ENERGY MANAGEMENT SYSTEM	SPR	SPEAKER
EMT	ELECTRICAL METALLIC TUBING	SPR	SPEAKER
EP	ELECTRIC PNEUMATIC	SP	SINGLE-POINT POWER
EQUIP	EQUIPMENT	SR	SURFACE RACEWAY
EXP	ELECTRIC WATER COOLER	SR	SURFACE RACEWAY
EXST	EXHAUST	SSW	SELECTOR SWITCH
EXP	EXPLOSION PROOF	SS	STOP/START PUSHBUTTONS
FA	FIRE ALARM	STAR	STAR
FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	STD	STANDARD
FACU	FAN COIL UNIT	SURF	SURFACE MOUNTED SWITCH
FAN	FAN COIL UNIT	SW	SWITCH
FB	FIBER OPTIC	SWBD	SWITCHBOARD
FIXT	FIXTURE	SYM	SYMMETRICAL
FLR	FLOOR	SYS	SYSTEM
FLUR	FLOURESCENT	TEL	TELEPHONE
FU	FUSE	TERM	TERMINAL
FUS	FUSED SAFETY DISCONNECT	TL	TURN LOCK
GA	GAUGE	TR	TRIP RESISTANT
GAL	GALVANIZED	T-STAT	THERMOSTAT
GALV	GALVANIZED	TRM	TELEPHONE TERMINAL CABINET
GC	GENERAL CONTRACTOR	TVIC	TELEVISION TERMINAL CABINET
GEN	GENERATOR	TYP	TYPICAL
GFI	GROUND FAULT CIRCUIT INTERRUPTER	UC	UNDER COUNTER
GFP	GROUND FAULT PROTECTOR	UE	UNDERGROUND ELECTRICAL UNDERGROUND
GRD	GROUND	UH	UNIT HEATER
GSR	GALVANIZED RIGID STEEL CONDUIT	UL	UNDERGROUND TELEPHONE UTILITY
HGA	HANDS-OFF AUTOMATIC SWITCH	UL	ULTRAVIOLET
HORZ	HORIZONTAL	V	VOLT
HP	HIGH POWER FACTOR	V	VOLT
HP	HIGH POWER FACTOR	V	VOLT
HPT	HEATING	VDT	VOLTS DISPLAY TERMINAL
HT	HEATER	VERT	VERTICAL
HTO	HEATING	VFD	VARIABLE FREQUENCY DRIVE
HTR	HOT	VOL	VOLUME
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	W	WATT
IC	INTERFERRING CAPACITY	WH	WIRE GUARD
IG	ISOLATED GROUND	WH	WIRE HEATER
IMC	INTERMEDIATE METAL CONDUIT	WID	WITHOUT
INCAND	INCANDESCENT	WP	WEATHERPROOF TRANSFORMER
IR	INTERLOCK	XFR	TRANSFER
J-BOX	JUNCTION BOX		
KVA	KILOVOLT-AMPERE	∠	ANGLE
KVAR	KILOVOLT-AMPERE REACTIVE	∅	AT
KW	KILOWATT	Δ	DELTA
KWH	KILOWATT HOUR	∞	FEET
LOC	LOCATE OR LOCATION	"	INCHES
L	LIGHT	#	NUMBER
LTG	LIGHTING	Ø	PHASE
LTV	LIGHTING	C	CENTER LINE
LWG	LOW VOLTAGE	P	PLATE
MAG S	MAXIMUM MAGNETIC STARTER		
MC	MENTONARY CONTACT		
MC	MECHANICAL CONTRACT		

ELECTRICAL SYMBOL LEGEND

LIGHTING SYMBOLS

- Lighting fixtures, typical, rectangular (various symbols)
- Filled circles indicate recessed, open circles indicate surface-mounted
- Diagonal line indicates lensed, chevron indicates wall wash
- Lighting fixtures, typical, round (various symbols)
- Center dot indicates pendant, diagonal line indicates lensed, chevron indicates wall wash
- Wall-mounted fixtures, typical (various symbols)
- Strip fixture
- Directional light, track light, flood light
- Linear light, tape light
- Emergency lighting unit, ceiling-mounted, integral battery
- Emergency lighting unit, ceiling-mounted, remote battery
- Emergency lighting unit, wall-mounted, integral battery
- Emergency lighting unit, wall-mounted, remote battery
- Exit light, ceiling-mounted, shading and arrows indicate faces and directional chevrons
- Exit light, wall-mounted, shading and arrows indicate faces and directional chevrons
- Exit/ellu combo
- Pole/area lights
- Post-top area light
- Bollard light
- Diagonal hatch indicates light on a critical circuit
- Solid hatch indicates light on an emergency or life safety circuit

WIRING

- Single-pole switch
- Two-pole switch
- Three-pole switch
- Switch modifiers: 3-way, 4-way, K-keyed, AC-above-counter, D-dimming, LV-low-voltage, T-timer, M-motor-rated
- Lighting control
- Lighting control panel
- Occupancy sensor
- Daylight harvesting sensor

Lighting Tags

- Top value: fixture type ID (underline)
- Bottom value: lowercase letter: switch ID
- Bottom value: number(s) (underline)
- Bottom value: uppercase letter(s): panel ID

ABSENCE OF A SWITCH DESIGNATION ON A LIGHTING FIXTURE INDICATES FIXTURE IS CONTROLLED BY THE ONLY SWITCH IN THE SPACE. AN "X" IN PLACE OF THE SWITCH DESIGNATION INDICATES UNSWITCHED.

SWITCH ID INDICATED BY A LOWERCASE LETTER. SWITCH IDS ARE UNIQUE PER SPACE. A SWITCH WITH AN ID "A" CONTROLS ALL DEVICES WITHIN THE SPACE IN WHICH IT IS LOCATED TAGGED WITH "A". A SWITCH WITH A TAGGED ID CONTROLS ALL LIGHTING FIXTURES WITHIN A SPACE. ID TAGS MAY BE USED ON CONTROL DEVICES OTHER THAN SWITCHES, SUCH AS OCCUPANCY SENSORS OR CONTACTORS.

Lighting controls sequence of operation location tag

GROUNDING AND LIGHTNING PROTECTION SYMBOLS

- Ground rod
- Ground rod with test well
- Static ground receptacle
- Lightning protection air terminal
- Lightning protection conductor splice

POWER SYMBOLS

- Wall outlet
- Receptacle
- Duplex recept

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIAL WHICH VIOLATES ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM THE MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

D. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OR RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED. MAINTAIN HEADROOM AND SPACE CONDITIONS.

E. FOR LOCATIONS AND QUANTITIES OF EQUIPMENT REFER TO FLOOR PLANS, DETAILS, SCHEDULES AND DIAGRAMS. WHERE THERE ARE DISCREPANCIES BETWEEN THESE DRAWINGS, THE GREATER OF EACH QUANTITY OR COST OR EQUIPMENT SPECIFICATIONS SHALL BE USED.

F. INSTALL WORK TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES THAT INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHANGES IN MAKING UP THE WORK PROPOSAL.

H. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH THE OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

I. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

J. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR ON THE EXTERIOR.

K. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL. ALL PENETRATIONS THROUGH NEW AND EXISTING RATED FIRE AND SMOKE PARTITIONS AND/OR FLOORS SHALL BE COMPLETELY SEALED USING MATERIALS AND METHODS DESCRIBED IN SUBSEQUENT "FIRE STOPPING" SPECIFICATIONS SECTIONS.

L. PROVIDE ALL NECESSARY FLASHINGS AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT. REMOVE CURBS AS REQUIRED.

M. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND APPROPRIATELY DISPOSED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REPRESENTATIVE ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

N. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS, EXCEPT WHERE NOTED OTHERWISE. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

O. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

P. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

Q. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO INDICATE ANY DISCREPANCIES BETWEEN THE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS PRIOR TO SUBMITTAL OF BID. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING FEEDERS AND EQUIPMENT (SIZES, CLEARANCES, ETC.) AND CONDITIONS.

R. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

S. ALL WORK SHALL BE DONE WHEN AS DIRECTED BY THE CLIENT AND IN A MANNER SATISFACTORY TO THE BUILDING OWNER. WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO OTHER BUILDING OCCUPANTS.

T. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.

2. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR CONDUITS AND SAFE INSTALLATION IN CONFORMITY WITH THE LATEST BUILDING CODES, AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLEMENTED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED, FOR ANY WORKMANSHIP OR EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES FROM THE DATE OF COVER AT CROSSINGS AND IN ALL AREAS. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR THE SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

3. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INCLUDING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

- PROJECT NAME AND LOCATION
- NAME OF ARCHITECT AND ENGINEER
- ITEM IDENTIFICATION
- APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

- SUBMISSIONS 11 IN, X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT THREE (3) COPIES OR IN ELECTRONIC FORMAT. THE ARCHITECT WILL FORWARD TWO (2) COPIES OR IN ELECTRONIC FORMAT TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE WITH ALL OPTION, DETAILS, MODEL NUMBERS AND PARTS CLEARLY IDENTIFIED.
- SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT THREE (3) COPIES OR IN ELECTRONIC FORMAT TO THE ARCHITECT. THE ARCHITECT WILL FORWARD TWO (2) COPIES OR IN ELECTRONIC FORMAT TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

- RACEWAYS
- WIRE AND CABLE
- SURFACE METAL RACEWAY
- LIGHTING FIXTURES
- WALL SWITCHES, DIMMERS AND SENSORS
- TEST PROCEDURES AND REPORTS
- LIGHTING DIMMING AND CONTROL SYSTEM

E. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED IN FULL SIZE HARD COPY AND ON CD (AUTOCAD 14.0 OR LATER) INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

5. SPECIAL INSPECTION

A. SPECIAL INSPECTION, WHERE REQUIRED, SHALL BE PROVIDED BY THE OWNER WHO SHALL RETAIN AN ACCREDITED SPECIAL INSPECTOR.

6. INSPECTIONS / TESTING

A. INDEPENDENT 3RD PARTY TESTING AND INSPECTIONS WHERE INDICATED SHALL BE PROVIDED BY THIS CONTRACTOR WHO SHALL HIRE THE INSPECTOR OR TESTING AGENCY.

7. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," "AND," "ALL" HAVE BEEN OMITTED FOR BREVITY.

B. DEFINITIONS:

- "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
- "INSTALL": TO ERRECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
- "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
- "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
- "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
- "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.
- "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
- "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

C. GENERAL

- THE DRAWINGS SHOW THE APPROXIMATE LOCATION OF ALL APPARATUS, THE EXACT LOCATIONS OF WHICH ARE SUBJECT TO THE APPROVAL OF THE OWNER WHO RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES IN THE LOCATION WITHOUT EXTRA COST, WHILE THE GENERAL RUN OF CONDUIT AND CABLES MAY BE INDICATED ON THE DRAWINGS, IT IS NOT INTENDED THAT THE EXACT ROUTING OR LOCATIONS OF CONDUIT & CABLES BE DETERMINED THEREFROM.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED BENDS, OFFSETS, FITTINGS AND CLEARING OBSTRUCTIONS IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO THE STRUCTURE, MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL TRADES
- WIRE ALL FIXTURES, DEVICES, ETC., TO RESPECTIVE PANELS AND CONTROLS AS SHOWN ON PLANS IN SYMBOL FORM
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP AND REMOVAL FROM THE SITE OF RESULTING DEBRIS.
- PROVIDE SEPARATE SYSTEMS AND ENCLOSURES FOR 208/120 AND 480/277 VOLT POWER AND CONTROL WIRING AND FOR EMERGENCY AND NORMAL POWER. COMMON PULL BOXES AND JUNCTION BOXES ARE NOT ACCEPTABLE.
- LOCATIONS INDICATED FOR LOCAL SWITCHES & OTHER LIGHTING CONTROLS ARE SUBJECT TO RELOCATION, AT OR NEAR DOORS, INSTALL AT INSIDE ON OPPOSITE SIDE OF HINGE. VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
- HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS SHALL CONFORM TO ADA REQUIREMENTS.
- ERECT WALL RECEPTACLE AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO WALL CONSTRUCTION BY ADJUSTABLE STRAP IRONS (GROUT IN MASONRY). VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF DETAILS AND FINISHES. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES AND WHERE VOLTAGE EXCEEDS 150 VOLTS TO GROUND. PROVIDE BARRIERS BETWEEN NORMAL AND EMERGENCY SWITCHES INSTALLED IN A COMMON OUTLET BOX.
- PANEL BOXES AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTIONS AND PULL BOXES IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE. REPORT BOXES FROM BUILDING STRUCTURE INDEPENDENT OF CONDUIT. PROVIDE FLOOR TO CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT MOTOR TERMINAL BOXES. COORDINATE WITH MOTOR BRANCH CIRCUIT WIRING. ADD BOX VOLUME WHERE REQUIRED.
- TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF ALL TRADES. COST OF ENERGY WILL BE PAID FOR BY OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

E. QUALITY ASSURANCE

- QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITERS LABORATORIES, INC., OR OTHER NATIONALLY APPROVED TESTING AGENCY AND BEARING THEIR LABEL. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.
- CURRENT CHARACTERISTICS:
 - SERVICE: 277/480 VOLT (AND 120/208 VOLT), 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.
 - DISTRIBUTION: 277/480 VOLT (AND 120/208 VOLT), 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.
- HEIGHTS OF OUTLETS: CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONFIRMING ALL MOUNTING HEIGHTS WITH ARCHITECT AND ARCHITECTURAL DRAWINGS.
 - FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:
 - WALL SWITCHES: 4 FT 0 IN.
 - EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN PRODUCT OF CODE, OR AS NOTED OR DIRECTED.

F. VOLTAGE DELIVERY, STORAGE AND HANDLING

- MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
- ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS SHALL BE PERMITTED. CHANGES OF MAKE/TYPE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

G. MATERIALS

- NAMEPLATES: PROVIDE BLACK LAMINCO SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.
- CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.
- INSERTS AND SUPPORTS:
 - INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.
 - SINGLE ROD: SIMILAR TO GRINNELL MG 281.
 - MULTI-ROD: SIMILAR TO FEE AND MASON SERIES 8000 WITH END CAPS AND CLOSURE STRIPS.
 - CLIP FORM NAILS FLUSH WITH INSERTS.
 - MAXIMUM LOADING 75 PERCENT OF RATING.
 - SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.
 - GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.
 - WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.
- PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD-APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.
- BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED: CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.
- FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.
- PROVIDE ACCESS DOORS WHEN CONCEALED ELECTRICAL EQUIPMENT REQUIRES ACCESS. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

8. DEMOLITION

A. "SELECTIVE DEMOLITION" IS HEREBY DEFINED TO INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE REMOVAL OF THE FOLLOWING EXISTING MATERIALS, ITEMS AND EQUIPMENT:

- REFER TO ELECTRICAL DEMOLITION PLAN AND RELATED NOTES FOR EXTENT OF DEMOLITION.
- REFER TO EXISTING DRAWINGS AND SITE CONDITIONS FOR ALL REMOVAL OF WORK NECESSARY FOR COMPLETION OF NEW WORK AS SHOWN. EACH BIDDER SHALL CAREFULLY EXAMINE THE PREMISES AND DOCUMENTS DURING THE BIDDING PERIOD AND ASCERTAIN THE EXTENT OF REMOVAL OF EXISTING WORK. IF ADDITIONAL WORK IS NOTED BY THE CONTRACTOR, CALL IT TO THE ATTENTION OF THE ARCHITECT PRIOR TO SUBMITTING BID. BY SUBMITTING A BID, THE CONTRACTOR WILL HAVE DEEMED TO HAVE MADE SUCH EXAMINATION, TO ACCEPT SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCES IN PREPARING HIS BID.
- ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED WITHOUT DAMAGE. NAILS AND OTHER FASTENERS REMOVED THAT ARE NOT IDENTIFIED AND PROTECTED AT LOCATIONS DIRECTED BY THE OWNER. IDENTIFY AND TAG ALL SALVAGE MATERIALS REGARDING LOCATION IN EXISTING BUILDING AND RELATIONSHIP OF PARTS.
- ALL DEMOLISHED AND/OR REMOVED MATERIALS NOT REQUIRED BY OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PREMISES, AND SHALL BE PROPERLY DISPOSED OF IN A LEGAL MANNER, OFF-SITE.
- CARE MUST BE TAKEN NOT TO DISTURB EXISTING WIRING, WHICH IS NOT EFFECTED BY DEMOLITION. RESTORE ALL CIRCUITS AND EQUIPMENT DISRUPTED OR INTERRUPTED BY THE REMOVAL OF ONLY PARTS OF EXISTING SYSTEMS. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED.
- ALL RACEWAYS TO BE ABANDONED SHALL BE REWORKED AS DEFINED WITHIN THE DEMOLITION NOTES. WHERE IT IS IMPRACTICAL TO REMOVE RACEWAY BACK TO SOURCE, DISCONNECT WIRING AT LOAD (EQUIPMENT) AND AT LINE SIDE, CUT AND CAP, FLUSH TO SURFACE. REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRING. CLEAN RACEWAY AS REQUIRED PRIOR TO REWIRING.
- ALL REQUIRED WORK FOR ITEM-10 TO THE EXISTING EQUIPMENT SHALL BE ACCOMPLISHED AFTER HOURS, THE EXACT DAY AND TIME SHALL BE DIRECTED BY OWNER, AND AT NO ADDITIONAL CHARGE.

9. CUTTING AND PATCHING

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF THE EXISTING AND NEW CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH, AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.

B. CORE BORING OF CONCRETE FLOORS AND/OR WALLS IF REQUIRED, SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

10. COORDINATION

A. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EQUIPMENT WITH ARCHITECTURAL DRAWINGS. IN CENTERING OUTLETS AND LOCKING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS, AND MECHANICAL EQUIPMENT, VARIATIONS IN FIRE PROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS, AND THE LIKE, AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSES TO THE OWNER.

11. EQUIPMENT FURNISHED BY OTHERS

A. THE CONTRACTOR SHALL FURNISH AND INSTALL WIRING FOR EQUIPMENT FURNISHED BY OTHERS, AS SHOWN ON DRAWINGS. COORDINATE WITH ALL OTHER TRADES OR DETAILS FOR INSTALLATION. THE TERM "WIRING" AS USED HEREIN, INCLUDES, BUT IS NOT LIMITED TO, FURNISHING AND INSTALLING CONDUIT, WIRE, JUNCTION BOXES, DISCONNECTS AND MAKING CONNECTIONS. CONTRACTOR SHALL CHECK ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE INSTALLED BY OTHERS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER WIRING AND NECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT TO CONFORM TO SPECIFIED REQUIREMENTS OF THE EQUIPMENT.

12. RACEWAYS:

A. PROVIDE RACEWAYS COMPLETE WITH BOXES, FITTINGS AND ACCESSORIES. CONDUIT OR TUBING SIZES REFERRED TO IN SPECIFICATIONS AND ON DRAWINGS ARE NOMINAL DIAMETERS. MINIMUM DIAMETER SHALL BE 3/4 IN. RACEWAYS SHALL RUN CONCEALED, UNLESS AS NOTED.

B. MATERIALS

- RACEWAYS:
 - RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.
 - ELECTRICAL METALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADED.
 - FLEXIBLE METAL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.
 - WIREWAYS: WIRE SHALL BE AS NOTED. MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.
 - SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN. COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW-ON.
 - RIGID ALUMINUM CONDUIT: FULL-WEIGHT PIPE, THREADED.
 - LIQUIDTIGHT FLEXIBLE METAL CONDUIT: SUNLIGHT RESISTANT OUTER JACKET WITH A FLEXIBLE METAL CORE.
 - POLYVINYL CHLORIDE (PVC) CONDUIT: SCHEDULE 40.
- FITTINGS AND ACCESSORIES:
 - RIGID STEEL: NONSPILT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.
 - ELECTRICAL METALLIC TUBING: COMPRESSION TYPE OR DOUBLE SETSCREWS. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.
 - FLEXIBLE METAL CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.
 - BUSHINGS: METALLIC INSULATED TYPE.
 - FOR RIGID ALUMINUM CONDUIT, PROVIDE NON-SPLIT, THREADED COPPER FREE ALUMINUM ALLOY OR HOT DIPPED GALVANIZED.
 - LIQUIDTIGHT FLEXIBLE METAL CONDUIT: LIQUID-TIGHT WITH SEALING RING AND INSULATED THROAT.
 - EXPLOSION PROOF TYPE-COMPLYING WITH THE CLASS AND TYPE OF SPACE.
 - PVC: LISTED FOR APPLICATION TYPE.
- BOXES:
 - OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.
 - JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 265/480 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING.
 - FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #8214 SERIES WITH ABOVE FLOOR FITTING. FLUSH OUTLETS SHALL BE HUBBELL #8244 SERIES WITH FLUSH FLOOR FITTING. INCREASE SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.
- PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAPHANGERS, OR WALL BRACKETS. PROVIDE ULBOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS RESTING ON SLAB. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER CODE AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY. EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL. BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 10 FT FROM FIRE CLAYS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING AND OUTLETS RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.

RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED.

[EDIT NOTE: ALLOW EMT FOR BRANCH CIRCUITS ONLY IF RGS CONDUIT IS REQUIRED FOR FEEDERS] EMT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES.

FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. RUN OUTLET BOX TO RECESSED LIGHTING FIXTURE. PROVIDE MINIMUM 4 FT AND MAXIMUM 1 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT, PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END.

CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COURSELINE.

EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE WITH RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES, AND ANCHOR ENDS. FOR RACEWAY NOT IN SLAB, PROVIDE FLEXIBLE CONDUIT WITH EXTERNAL BONDING JUMPER STRIP. IN SLAB, PROVIDE 0.2" TYPE "A" OR APPLICATION TYPE "A" OR "C" WITH GROUND CONTINUITY.

C. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL OR WIREMOLD FIRE RATED POKE-THROUGH FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR.

D. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS.

E. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

13. WIRE AND CABLE

A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 18 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLEING SHALL BE NO. 12 MINIMUM (120 VOLTS AND OVER 100 FT CIRCUIT LENGTH, PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH, PROVIDE NO. 10 MINIMUM).

C. CONTROL AND ALARM CABLEING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH, PROVIDE NO. 12 MINIMUM.

D. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN CODE ACCEPTABLE VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

E. INSULATION SHALL BE RUBBER AND THERMOPLASTIC, 90 DEG C MEETING ASTM AND ICSA STANDARDS. TYPE THINWATHN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. SFF-2 SHALL BE USED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLOURESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG. C. UNDERGROUND SERVICE ENTRANCE CABLEING SHALL BE USE: PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW) IN EXTERIOR LOCATIONS INCLUDING UNDERGROUND NON-SERVICE CABLES.

[EDIT NOTE: DELETE IF OWNER/ BUILDING RULES DISALLOW ITS USE]

F. METAL-CLAD CABLE (MC) WITH GROUND WIRES SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL. THAT PRICE IS BASED UPON THE USE OF MC CABLE. BX CABLE SHALL NOT BE USED.

G. COLOR CODING SHALL BE AS FOLLOWS:

- 120/208 VOLT SYSTEM:
 - BLACK FOR A PHASE
 - RED FOR B PHASE
 - BLUE FOR C PHASE
- 265/480 VOLT SYSTEM:
 - BROWN FOR A PHASE
 - ORANGE FOR B PHASE
 - YELLOW FOR C PHASE

3. NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

H. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING, INDICATE TYPE (CONTROL OR ALARM), STRANDED OR WIRE, AND POINTS OF ORIGIN AND TERMINATIONS. SIMILAR TO STRANCO PRODUCTS, INC.

I. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION TYPE OF TWINNING CONDUCTORS AND CLEAR NYLON UNINSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. [EDIT NOTE: DELETE MECHANICAL IF ONLY COMPRESSION TYPE IS ALLOWED BY OWNER/ BUILDING RULES]. ALUMINUM CONDUCTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING IDENTICAL TO CABLE TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

J. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. IF MORE THAN THREE CIRCUITS, DERATE WIRE CURRENT CARRYING CAPACITY AND MANITON CODE REQUIREMENTS ON CONDUIT FILL. NEUTRAL CONDUCTOR SHALL BE COUNTED AS A CURRENT CARRYING CONDUCTOR. SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION. PULL NO. THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF NORMAL AND EMERGENCY. 120/208 AND 265/480 VOLT SYSTEMS, EXCEPT 480 VOLT MOTOR BRANCH CIRCUIT WIRING AND REELED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

K. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

L. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND MOTOR BRANCH CIRCUITS OVER 25 HP.

M. INFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

14. GROUNDING

A. GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 250.

B. AN SEPARATE GREEN-COLORED, INSULATED EQUIPMENT GROUNDING CONDUCTOR COMMONLY DESCRIBED AS A "GREEN WIRE" SHALL BE PROVIDED FOR ALL FEEDER AND BRANCH CIRCUITS PROTECTED BY OVERCURRENT DEVICES. GREEN WIRE GROUND SHALL ALSO BE PROVIDED FOR FLEXIBLE CONDUIT AND MOTOR CIRCUITS. METALLIC RACEWAY CONTINUITY SHALL BE MAINTAINED THROUGHOUT. 6 WIRE WHERE ISOLATED GROUNDING BRANCH CIRCUITS ARE USED, PROVIDE A SEPARATE AND DISTINCTLY MARKED GREEN GROUND WIRE. EACH GROUNDING CONDUCTOR SHALL SERVE A MAXIMUM OF THREE CIRCUITS/POLES.

C. SERVICE AND EQUIPMENT:

- FOR SEPARATELY DERIVED SERVICES OR SERVICE SWITCHES, GROUND THE NEUTRAL CONDUCTOR THROUGH DISCONNECTING LINK AND GROUND TERMINAL TO WATER SERVICE GROUND CLAMP, BUILDING STEEL, FOUNDATION REBAR AND DRIVEN GROUND RODS.
- GROUND THE CENTER TAP OF Y-CONECTED TRANSFORMERS THROUGH SECONDARY NEUTRAL AND GROUND BUS TO WATER SERVICE GROUND CLAMP OR BUILDING STEEL.

ROUND CLAMPS SHALL BE BRONZE, SOLDERLESS TYPE WITH BRONZE SCREWS, SUITABLE FOR RECEIVING NOTED CONDUCTORS. MOUNT GROUND CLAMP ON WATER SERVICE AT STREET SIDE OF MAIN SERVICE VALVE. PROVIDE JUMPER TO BYPASS WATER METER.

D. PROVIDE A SEPARATE, GREEN-COLORED, INSULATED EQUIPMENT GROUNDING CONDUCTOR WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. THIS CONDUCTOR SHALL BE SEPARATE FROM THE ELECTRICAL SYSTEM GROUNDING CONDUCTOR (NEUTRAL). TERMINATE EACH END OF THIS GROUNDING CONDUCTOR ON A L1 LISTED LUG, BUS OR BUSHING. THE GROUNDING CONDUCTOR SIZE SHALL BE IN ACCORDANCE WITH NEC, TABLE 250.122.

E. GROUND NONCURRENT CARRYING METAL PARTS OF DISTRIBUTION PANELS, SWITCHBOARDS, TRANSFORMER ENCLOSURES, RACEWAYS, CABLE TRAY SYSTEMS, BUSWAY ENCLOSURES, CONTROLLER ENCLOSURES, MOTOR FRAMES AND OTHER ELECTRICAL EQUIPMENT.

F. GROUND EXPOSED METAL BUILDING METAL, METAL STRUCTURES, AND PIPING THAT COULD BECOME ENERGIZED IN ACCORDANCE WITH THE NEC, STATE, AND OTHER APPLICABLE LAWS AND REGULATIONS.

G. PROVIDE COMMON GROUNDS BETWEEN THE ELECTRICAL SERVICE, TELEPHONE SERVICE, UNDERGROUND METALLIC PIPING, CONDUIT, AND FOUNDATION FOOTINGS REBAR PER NEC ARTICLES 250.6 & 250.52.

15. DEVICES:

A. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED BY LEVITON, HUBBELL, OR EQUAL.

B. LOCAL WALL SWITCHES SHALL BE SPECIFICATION GRADE, TOGGLE, QUIET TYPE, RATED 20 AMP, 120/277 VOLT, AC. ALL SWITCHES SHALL BE GANGED WITH MULTI DEVICE PLATES, IN AREAS WHERE DIMMERS ARE SPECIFIED WITH WALL SWITCHES. ALL SWITCHES SHALL MATCH DIMMER SERIES AND SHALL BE GANGED TOGETHER.

SIMILAR TO:

- IN FINISHED AREAS ARCHITECTURAL TYPE ROCKER SWITCH: LEVITON DECORA PLUS #6621-2 (SINGLE POLE), #6622-2 (DOUBLE POLE), #6623-2 (THREE WAY), #6624-2 (FOUR WAY).
- ALL OTHER AREAS HEAVY-DUTY INDUSTRIAL TYPE TOGGLE SWITCH: LEVITON 1221-2 (SINGLE POLE), 1222-2 (DOUBLE POLE), 1223-2 (3 WAY), 1224-2 (4 WAY).
- LOOKING TYPE: LEVITON 1221-21 (SINGLE POLE), 1222-21 (DOUBLE POLE), 1223-21 (THREE WAY), 1224-21 (FOUR WAY).
- ILLUMINATED SWITCHES FOR FINISHED AREAS: LEVITON DECORA PLUS #6631-2 (SINGLE POLE, 120V).
- ILLUMINATED SWITCHES FOR UNFINISHED AREAS: TOGGLE TYPE, LEVITON #1221-4H.
- PILOT LIGHT SWITCHES IN FINISHED AREAS: LEVITON DECORA PLUS #6626-2 (SINGLE POLE).
- PILOT LIGHT SWITCHES IN UNFINISHED AREAS: LEVITON DECORA PLUS # 1221-PLC (SINGLE POLE).

D. DIMMER SWITCHES: AS NOTED ON PLANS OR AS SPECIFIED BY ARCHITECT/LIGHTING DESIGNER, DIMMERS MUST MATCH LIGHT SOURCE.

16. LIGHTING FIXTURES:

A. PROVIDE LIGHTING FIXTURES, LAMPS AND COMPONENTS AS PER LIGHTING FIXTURE SCHEDULE. FIXTURES SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE, PLASTER RINGS, BACKBOXES, CONDUIT, ETC. AS REQUIRED FOR A COMPLETE AND SATISFACTORY ASSEMBLY. LISTED CATALOG NUMBERS DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES.

B. FIXTURES SHALL BE COMPLETELY WIRED AND CONSTRUCTION TO COMPLY WITH LATEST CODES AND UNDERWRITERS LABORATORIES STANDARDS FOR ELECTRICAL LIGHTING FIXTURES AND THE STATE AND LOCAL ENERGY CODES. UL OR ETL CERTIFICATION MUST BE INDICATED ON ALL FIXTURES.

C. ALL FIXTURES SHALL BE INDEPENDENTLY MOUNTED FROM BLACK IRON OR BUILDING STRUCTURE AS REQUIRED AND NOT FROM CEILING GRID. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF CEILING CONSTRUCTION TYPES WITH LIGHTING FIXTURES. FIXTURES SHALL BE PROVIDED FOR OPERATION WITH PROPER VOLTAGE CHARACTERISTICS. REFER TO PLANS FOR INFORMATION.

D. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND QUANTITIES OF LIGHTING FIXTURES.

E. LED FIXTURES SHALL HAVE REMOVABLE BOARDS FOR END OF LIFE REPLACEMENT OF SOURCE.

F. ALL LED FIXTURES SHALL HAVE MINIMUM 5 YEAR WARRANTIES ON LED BOARDS AND DRIVERS.

G. LED COLOR TEMPERATURE SHALL MATCH ALL OTHER SOURCES, UNLESS SPECIFICALLY REQUESTED IN LIGHTING FIXTURE SCHEDULE.

H. FLOURESCENT LIGHTING FIXTURES SHALL COMPLY WITH IES STANDARDS RP-1 AND RP-24 AND NEMA STANDARD PUBLICATION LE-1. INDUSTRIAL FIXTURES SHALL COMPLY WITH RLM STANDARDS INSTITUTE AND SHALL BEAR THE RLM LABEL.

I. FURNISH ALL FLOURESCENT, INCANDESCENT, HID OR TUNGSTEN HALOGEN LAMPS AS INDICATED ON LIGHTING FIXTURE SCHEDULE AND AS REQUIRED FOR EACH FIXTURE. ALL FLOURESCENT BALLASTS SHALL BE T8 OR T8, SPX35 RS, MIN. CR 80 +1 UNLESS OTHERWISE NOTED. ALL HID LAMPS SHALL BE COLOR CORRECTED. LAMPS SHALL BE SUPPLIED BY PHILIPS, GENERAL ELECTRIC, OSRAM/SYLVANIA.

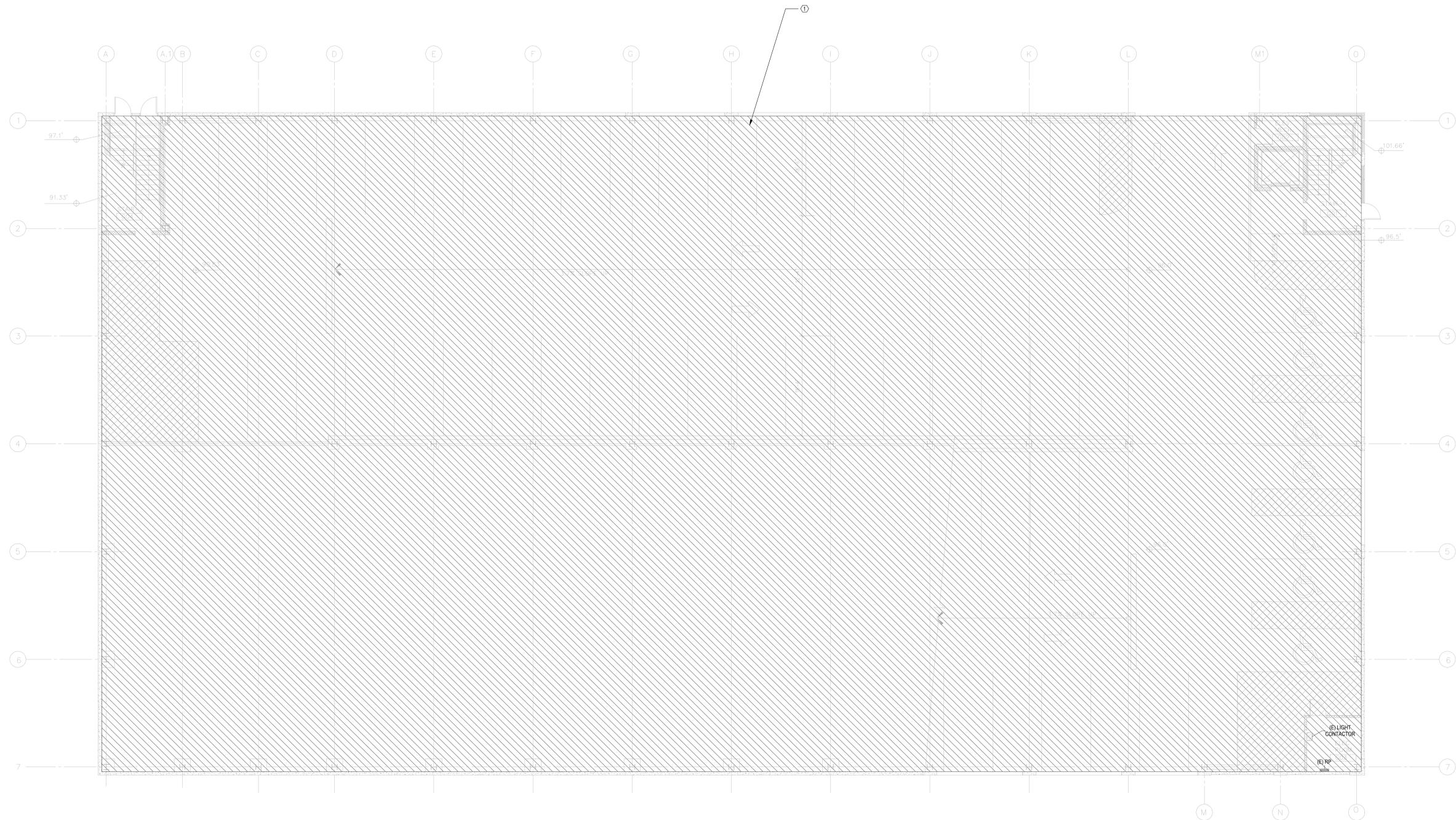
J. BALLASTS SHALL BE RTC GOLD LABEL, INDICATING APPROVED INTEGRAL BALLAST PROTECTION. HIGH BALLAST FACTOR (90% OR GREATER), TYPE 'E' (BALLAST EFFICI

GENERAL DEMOLITION NOTES

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2. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
3. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES.
4. REPAIR ANY SURFACES DISTURBED DURING REMOVAL OR REPLACEMENT OF EQUIPMENT AND DEVICES. PREPARE REPAIRED SURFACES FOR NEW FINISHED IN NEW WORK PHASE.
5. REFER TO PHASING SET OF PLANS FOR INFORMATION ON TEMPORARY AND EXIT SIGN LIGHTS.

KEYNOTES

1. DISCONNECT AND REMOVE ALL EXISTING CEILING-MOUNTED LIGHT FIXTURES IN SHADED REGION, AND ALL EXIT SIGNS. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND REMOVING ALL FIXTURES. CONTRACTOR TO COORDINATE WITH NEW WORK PLANS AND SHALL INTERCEPT GARAGE AREA WIRING AT A COMMON LOCATION, IDENTIFY WIRING AND REMOVE WIRING AND EXPOSED CONDUIT BACK TO THE COMMON INTERCEPTION POINT.



1 LEVEL 1 ELECTRICAL DEMOLITION PLAN
 E101 1/8" = 1'-0"

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ARCHITECTURE FOR CHANGE

15 Bethany Street • New Brunswick, NJ 08901 • T: 732.249.6242
 2400 W. Hunting Park Ave., Bldg. 9 • Philadelphia, PA 19129-3302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

JOHN P. RENGEPIIS
 NJ PE 24GE06010200

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UNION COUNTY IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710

Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS

Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/25
 Drawn By: HSZ
 Checked By: JPR

Sheet Name:
LEVEL 1 ELECTRICAL DEMOLITION PLAN

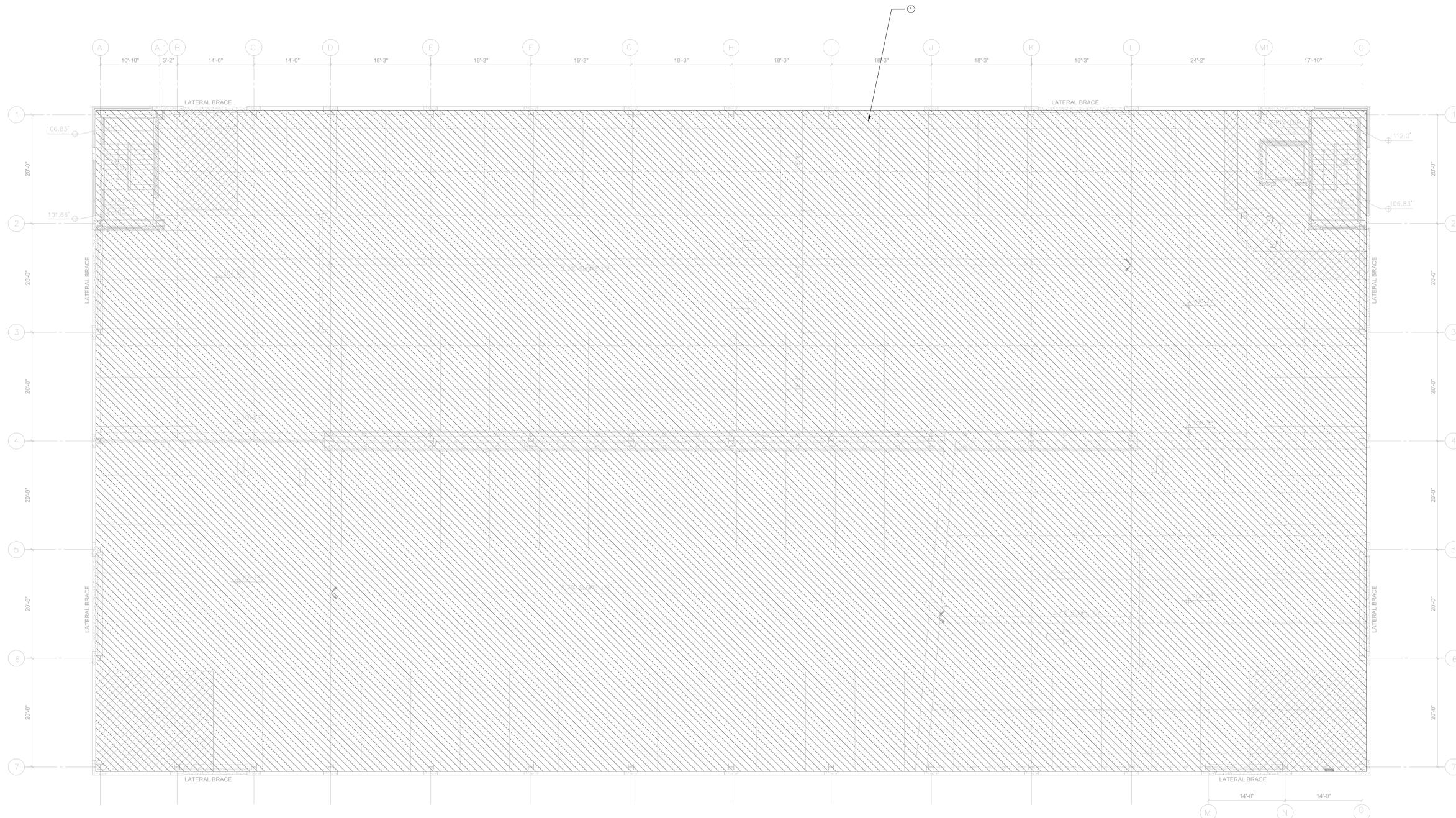
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E101
 SHEET 50 OF 58

GENERAL DEMOLITION NOTES

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 2450 W Hunting Park Ave., Bldg 9 • Philadelphia, PA 19129-1302 •
 T: 215.634.3400

Pennoni ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T 973.265.9775 F 973.265.9774
 NJ COA NO. GA28033300

JOHN P. RENGEPIS
 NJ PE 24GE06019200

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Sheet Name:
LEVEL 2 ELECTRICAL DEMOLITION PLAN

Sheet No:

E102

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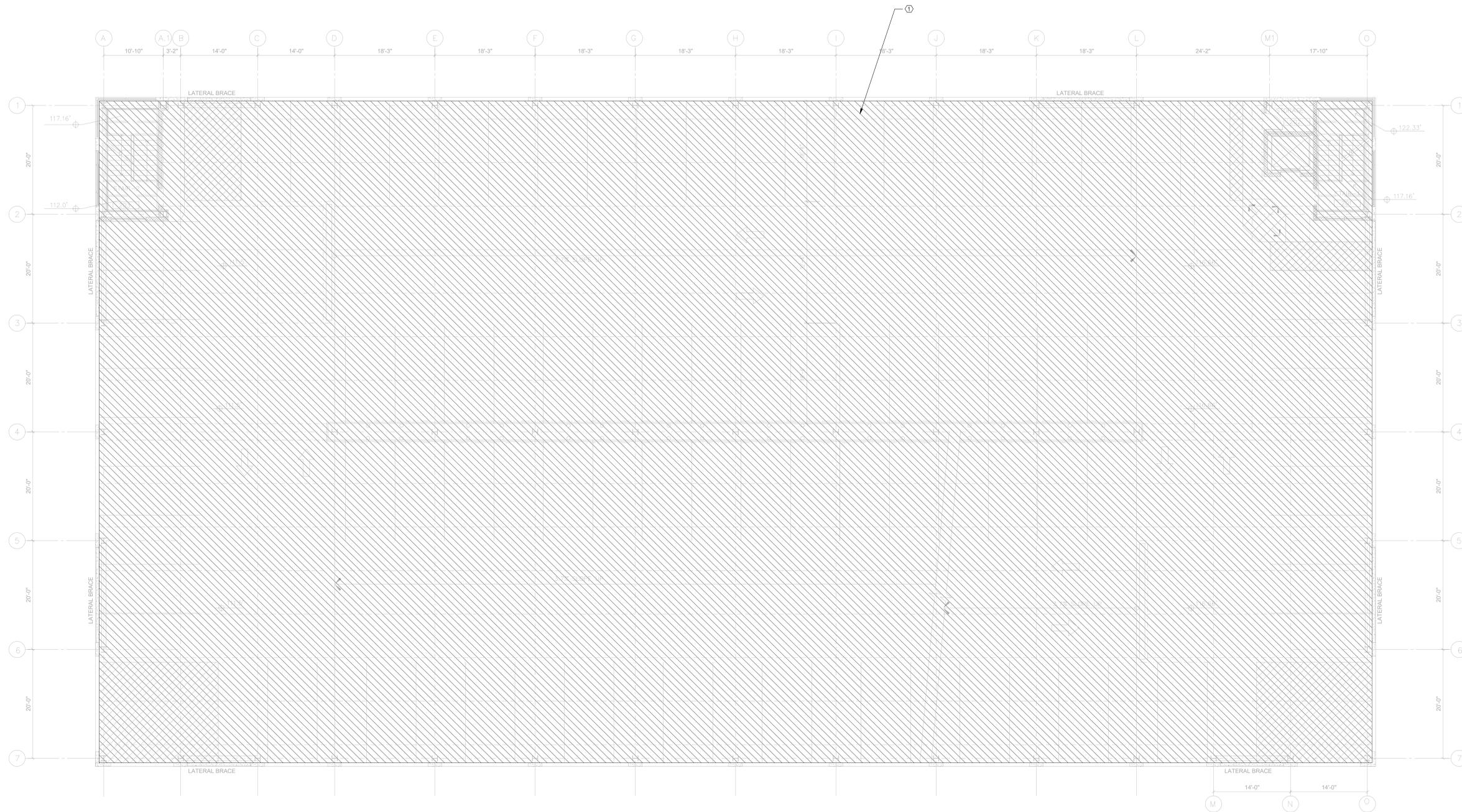
1 LEVEL 2 ELECTRICAL DEMOLITION PLAN
 E102 1/8" = 1'-0"

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KEYNOTES

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1 LEVEL 3 ELECTRICAL DEMOLITION PLAN
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2400 W Hunting Park Ave., Bldg 9 • Philadelphia, PA 19129-1302 •
T: 215.634.3400

Pennoni PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T: 973.265.9775 F: 973.265.9774
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**LEVEL 3 ELECTRICAL
DEMOLITION PLAN**

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E103
SHEET 52 OF 58

GENERAL DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE TO VISIT THE PROJECT SITE AND VERIFY ALL QUANTITIES AND LOCATIONS OF ALL EQUIPMENT AND DEVICES THAT ARE TO BE DEMOLISHED PRIOR TO BID.
2. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
3. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES.
4. REPAIR ANY SURFACES DISTURBED DURING REMOVAL OR REPLACEMENT OF EQUIPMENT AND DEVICES. PREPARE REPAIRED SURFACES FOR NEW FINISHED IN NEW WORK PHASE.
5. REFER TO PHASING SET OF PLANS FOR INFORMATION ON TEMPORARY AND EXIT SIGN LIGHTS.

KEYNOTES

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES IN STAIRS AND STORAGE ROOMS, ALONG WITH ALL EXIT SIGNS. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND REMOVING ALL LIGHT FIXTURES. CONTRACTOR TO COORDINATE WORK WITH NEW WORK PLANS AND SHALL INTERCEPT WIRING AT A COMMON LOCATION. IDENTIFY WIRING AND REMOVE WIRING AND EXPOSED CONDUIT BACK TO THE COMMON INTERCEPTION POINT. REMOVE EXISTING ROOF-LEVEL LIGHTING POLES FOR STRUCTURAL COORDINATION. STORE FIXTURES FOR REINSTALLATION. REINSTALL AND RECONNECT UPON COMPLETION OF STRUCTURAL WORK. WIRE AND CONDUIT FOR POLES SHALL BE CAPPED.



No.	Date	Description
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PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

JOHN P. RENGEPIIS
 NJ PE 24GE06010200

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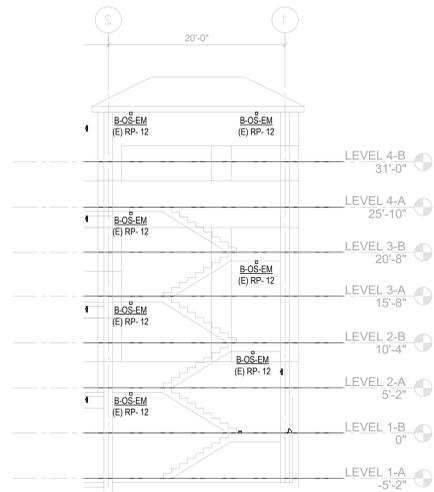
Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS

Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/25
 Drawn By: HSZ
 Checked By: JPR

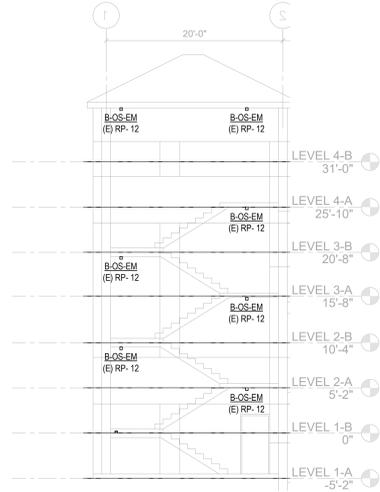
Sheet Name:
LEVEL 4 ELECTRICAL DEMOLITION PLAN

Sheet No:
E104
 SHEET 53 OF 58

1 LEVEL 4 ELECTRICAL DEMOLITION PLAN
 E104
 1/8" = 1'-0"



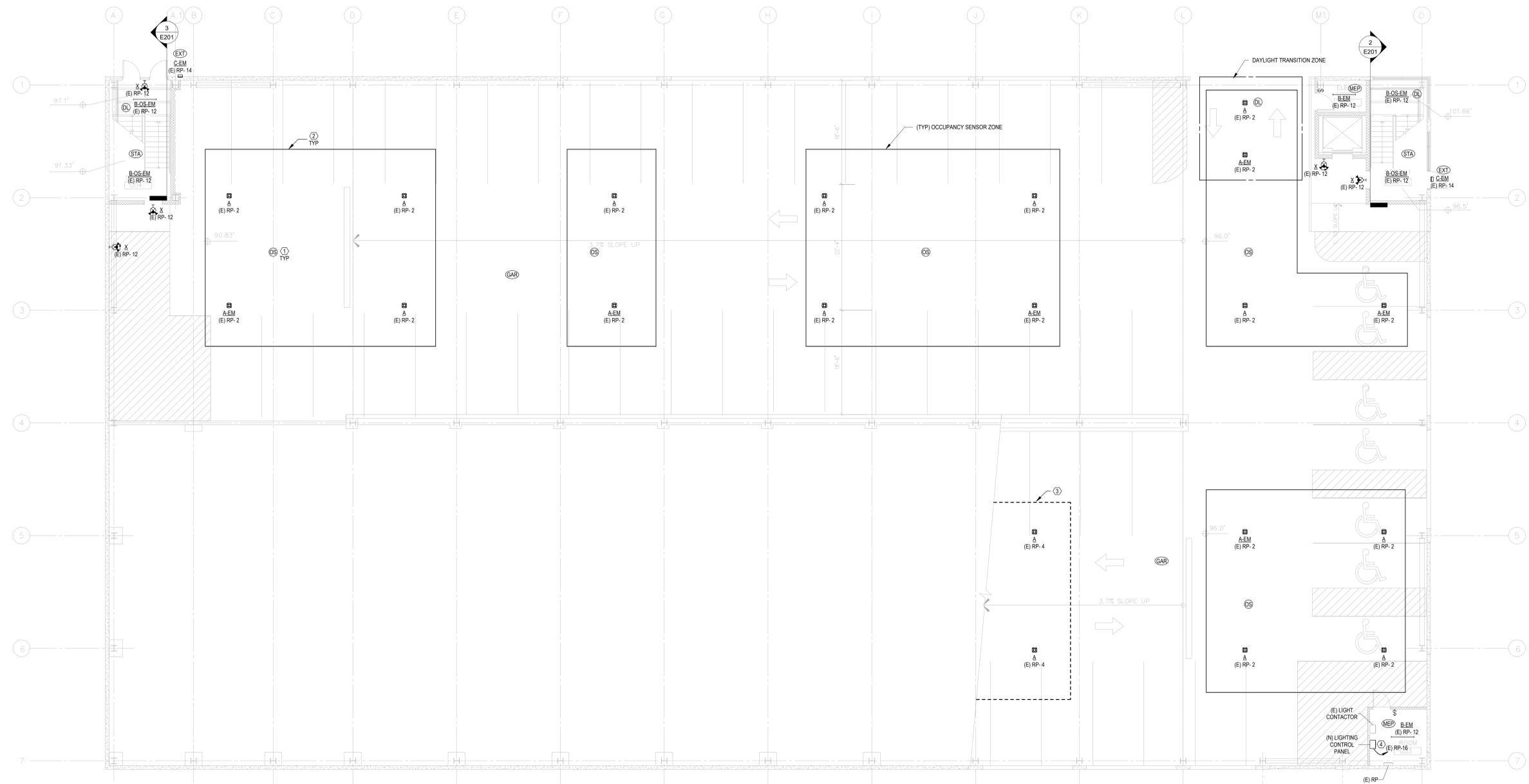
3 STAIR-2 LIGHTING SECTION VIEW
E201 1/8" = 1'-0"



2 STAIR-1 LIGHTING SECTION VIEW
E201 1/8" = 1'-0"

- KEYNOTES**
- 1 BASIS OF DESIGN FOR OCCUPANCY SENSORS LOCATION IS BASED ON WATTSTOPPER C1-300 EXTENDED RANGE LENS OCCUPANCY SENSOR. FINAL LOCATIONS AND QUANTITY OF OCCUPANCY SENSORS SHALL BE DETERMINED BASED ON FINAL OCCUPANCY DEVICE CHOSEN.
 - 2 THE OCCUPANCY SENSOR WITHIN THIS ZONE CONTROLS ALL LIGHTS WITHIN THIS ZONE.
 - 3 CONTINUATION OF THIS ZONE IS SHOWN ON E202.
 - 4 PROVIDE AN ASTRONOMICAL LIGHTING CONTRACTOR CONTROL PACKAGE SIMILAR TO INTEMATIC ETCB284512PCR WITH CAPABILITIES TO PROVIDE UP TO FOUR CONTROL ZONES 5 CIRCUITS ON ONE ZONE AND SINGLE CIRCUIT ON EACH OF THE OTHER THREE ZONES.

- GENERAL SHEET NOTES**
1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
 2. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT TO IDENTIFY IF PHASED CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS IS NEEDED.
 3. PROVIDE TYPED PANEL BOARD DIRECTORIES TO REFLECT AS-CONSTRUCTED CONDITIONS VERIFY DURING CONSTRUCTION AND REVISE ACCORDINGLY.
 4. IT IS THE INTENT OF THESE DIAGRAMMATIC DRAWINGS TO PROVIDE THE PROJECT SCOPE INCLUDING, BUT NOT LIMITED TO PHASED DEMOLITION AND NEW CONSTRUCTION. EXISTING INFORMATION INDICATED ON THESE PLANS DOES NOT REPRESENT ALL EXISTING CONDITIONS. THIS CONTRACTOR SHALL BECOME FAMILIAR WITH EXISTING CONDITIONS, SCOPE OF PHASING, AND PROJECT INTENT PRIOR TO BID SUBMISSION. NO EXTRA WILL BE ALLOWED DUE TO THE LACK OF KNOWLEDGE OF EXISTING CONDITIONS TO COORDINATE RELOCATION OF ELECTRICAL SYSTEMS AS REQUIRED.
 5. PROVIDE CUTTING, PATCHING, AND RESTORATION OF FINISHES NECESSARY FOR WORK SURFACES DAMAGED BY THIS WORK AND SPACES AROUND CONDUITS PASSING THROUGH FLOORS AND WALLS SHALL BE NEATLY PATCHED AND FINISHED TO MATCH NEW EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT OR PENETRATED IN ANY MANNER. THE SPACES AROUND THE CONDUITS SHALL BE SEALED TO PREVENT ENTRANCE OF MOISTURE. PROVIDE FIRE STOPPING PER UL APPROVED METHODS.
 6. EXPOSED ABANDONED RACEWAY SHALL BE REMOVED.
 7. REFER TO SHEET E500 FOR PANEL SCHEDULE, LIGHTING FIXTURE SCHEDULE, AND LIGHTING CONTROL SEQUENCE OF OPERATIONS.
 8. UTILIZE EXISTING CIRCUITING SERVING THE AREA IF VERIFIED CIRCUIT IS IN ACCEPTABLE CONDITION TO BE RE-USED. CIRCUIT SHALL NOT SERVE MORE THAN 18 LIGHTS. PROVIDE NEW CIRCUITING IF EXISTING CIRCUIT CANNOT BE UTILIZED.
 9. IN AREAS OF FOUNDATION REPAIRS WHERE IN-SITU CONDUIT IS EXPOSED, VERIFY CONDUIT IS IN ACCEPTABLE CONDITION TO BE RE-USED. IF CONDUIT IS DEEMED TO BE IN UNACCEPTABLE CONDITION (RUSTED, BROKEN, ETC.), PROVIDE NEW CONDUIT OF SAME MATERIAL AND SIZE.
 10. PROVIDE NEW COVER PLATES FOR ALL OPEN ELECTRICAL JUNCTION BOXES.
 11. CONDUIT RACEWAY SHALL MATCH EXISTING. RACEWAY SHALL BE MINIMUM GALVANIZED EMT, AND RIGID GALVANIZED SHALL BE USED WHERE POTENTIALLY SUBJECT TO PHYSICAL DAMAGE.



1 LEVEL 1 POWER PLAN
E201 1/8" = 1'-0"

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PENNONI ASSOCIATES INC.
1065 RAYMOND BOULEVARD
SUITE 2102
NEWARK, NJ 07102
T 973.265.9775 F 973.265.9774
NJ COA NO. GA2803300

JOHN P. RENGEPIE
NJ PE 24CE06010200

Client:
**UNION COUNTY
IMPROVEMENT AUTHORITY**
10 Elizabethtown Plaza - 5th Floor
Elizabeth, NJ 0720710

Project:
**GERRY B. GREEN PLAZA PARKING
GARAGE REPAIRS**

Block 246 / Lot 1
200 WEST 2ND STREET
PLAINFIELD, NJ
Drawing Information:
Project No: DIGAX25005
Date: 11/03/25
Drawn By: HSZ
Checked By: JPR

Sheet Name:
LEVEL 1 POWER PLAN

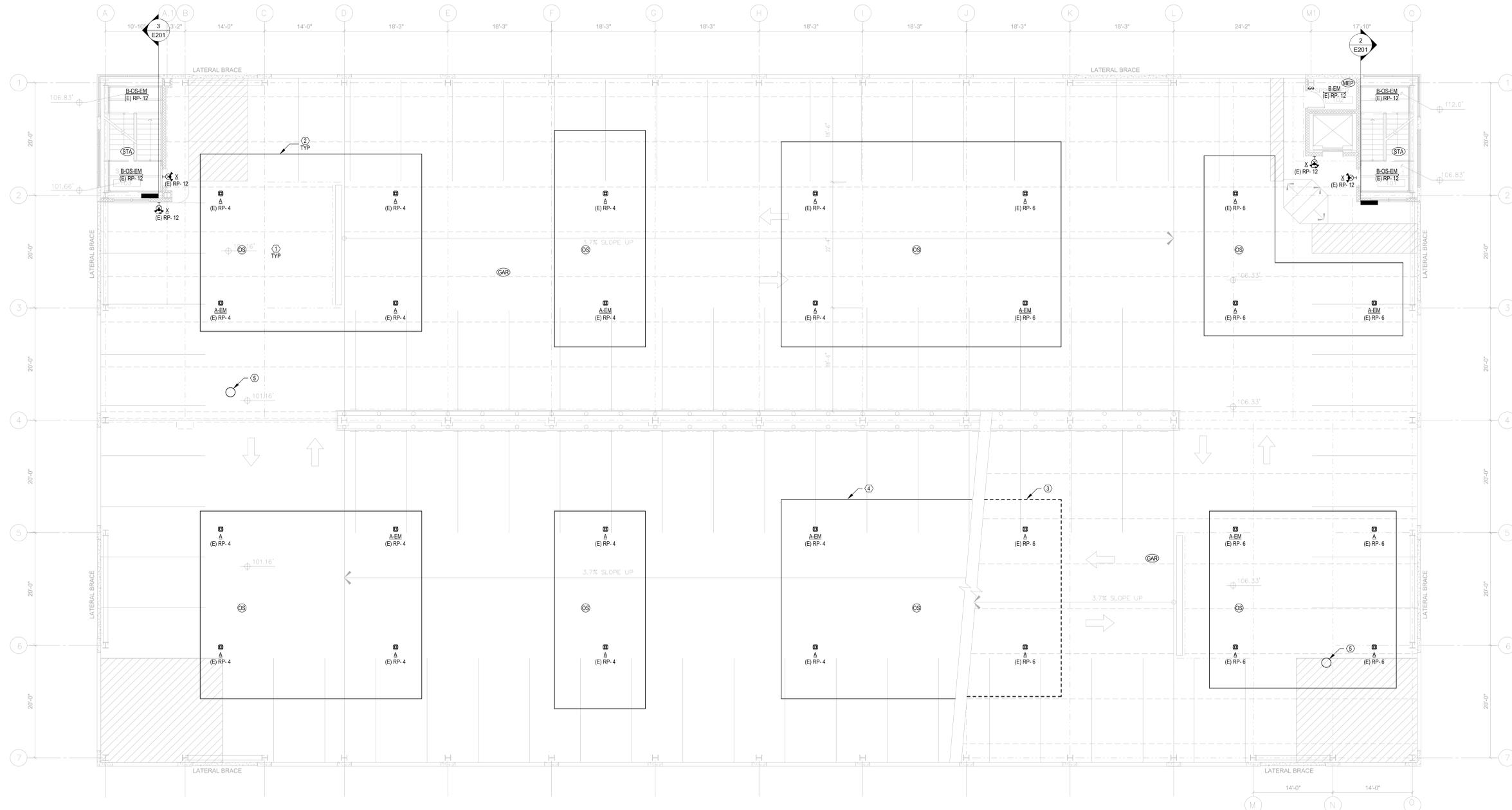
Sheet No:
E201
SHEET 54 OF 58

KEYNOTES

- 1 BASIS OF DESIGN FOR OCCUPANCY SENSORS LOCATION IS BASED ON WATTSTOPPER CI-300 EXTENDED RANGE LENS OCCUPANCY SENSOR. FINAL LOCATIONS AND QUANTITY OF OCCUPANCY SENSORS SHALL BE DETERMINED BASED ON FINAL OCCUPANCY DEVICE CHOSEN.
- 2 THE OCCUPANCY SENSOR WITHIN THIS ZONE CONTROLS ALL LIGHTS WITHIN THIS ZONE.
- 3 CONTINUATION OF THIS ZONE IS SHOWN ON E203.
- 4 CONTINUATION OF THIS ZONE IS SHOWN ON E201.
- 5 REPAIR AND/OR REPLACE ANY DAMAGED CONDUIT AND WIRE WHERE EXPLORATORY CORE SAMPLING OCCURED. APPROXIMATE LOCATION SHOWN ON DRAWING. VERIFY IN FIELD.

GENERAL SHEET NOTES

1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
2. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT TO IDENTIFY IF PHASED CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS IS NEEDED.
3. PROVIDE TYPED PANEL BOARD DIRECTORIES TO REFLECT AS-CONSTRUCTED CONDITIONS VERIFY DURING CONSTRUCTION AND REVISE ACCORDINGLY.
4. IT IS THE INTENT OF THESE DIAGRAMMATIC DRAWINGS TO PROVIDE THE PROJECT SCOPE INCLUDING, BUT NOT LIMITED TO PHASED DEMOLITION AND NEW CONSTRUCTION. EXISTING INFORMATION INDICATED ON THESE PLANS DOES NOT REPRESENT ALL EXISTING CONDITIONS. THIS CONTRACTOR SHALL BECOME FAMILIAR WITH EXISTING CONDITIONS, SCOPE OF PHASING, AND PROJECT INTENT PRIOR TO BID SUBMISSION. NO EXTRA WILL BE ALLOWED DUE TO THE LACK OF KNOWLEDGE OF EXISTING CONDITIONS TO COORDINATE RELOCATION OF ELECTRICAL SYSTEMS AS REQUIRED.
5. PROVIDE CUTTING, PATCHING, AND RESTORATION OF FINISHES NECESSARY FOR WORK SURFACES DAMAGED BY THIS WORK AND SPACES AROUND CONDUITS PASSING THROUGH FLOORS AND WALLS SHALL BE NEATLY PATCHED AND FINISHED TO MATCH NEW EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT OR PENETRATED IN ANY MANNER. THE SPACES AROUND THE CONDUITS SHALL BE SEALED TO PREVENT ENTRANCE OF MOISTURE. PROVIDE FIRE STOPPING PER UL APPROVED METHODS.
6. EXPOSED ABANDONED RACEWAY SHALL BE REMOVED.
7. REFER TO SHEET E500 FOR PANEL SCHEDULE, LIGHTING FIXTURE SCHEDULE, AND LIGHTING CONTROL SEQUENCE OF OPERATIONS.
8. UTILIZE EXISTING CIRCUITING SERVING THE AREA IF VERIFIED CIRCUIT IS IN ACCEPTABLE CONDITION TO BE RE-USED. CIRCUIT SHALL NOT SERVE MORE THAN 18 LIGHTS. PROVIDE NEW CIRCUITING IF EXISTING CIRCUIT CANNOT BE UTILIZED.
9. IN AREAS OF FOUNDATION REPAIRS WHERE IN-SITU CONDUIT IS EXPOSED, VERIFY CONDUIT IS IN ACCEPTABLE CONDITION TO BE RE-USED. IF CONDUIT IS DEEMED TO BE IN UNACCEPTABLE CONDITION (RUSTED, BROKEN, ETC.), PROVIDE NEW CONDUIT OF SAME MATERIAL AND SIZE.
10. PROVIDE NEW COVER PLATES FOR ALL OPEN ELECTRICAL JUNCTION BOXES.
11. CONDUIT RACEWAY SHALL MATCH EXISTING. RACEWAY SHALL BE MINIMUM GALVANIZED EMT, AND RIGID GALVANIZED SHALL BE USED WHERE POTENTIALLY SUBJECT TO PHYSICAL DAMAGE.



1 LEVEL 2 POWER PLAN
 E202 1/8" = 1'-0"

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 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T: 973.265.9775 F: 973.265.9774
 NJ COA NO. GA28033300

ROBERT H. GOULD
 NJ PE 24GE0550100

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Project:
GERRY B. GREEN PLAZA PARKING GARAGE REPAIRS

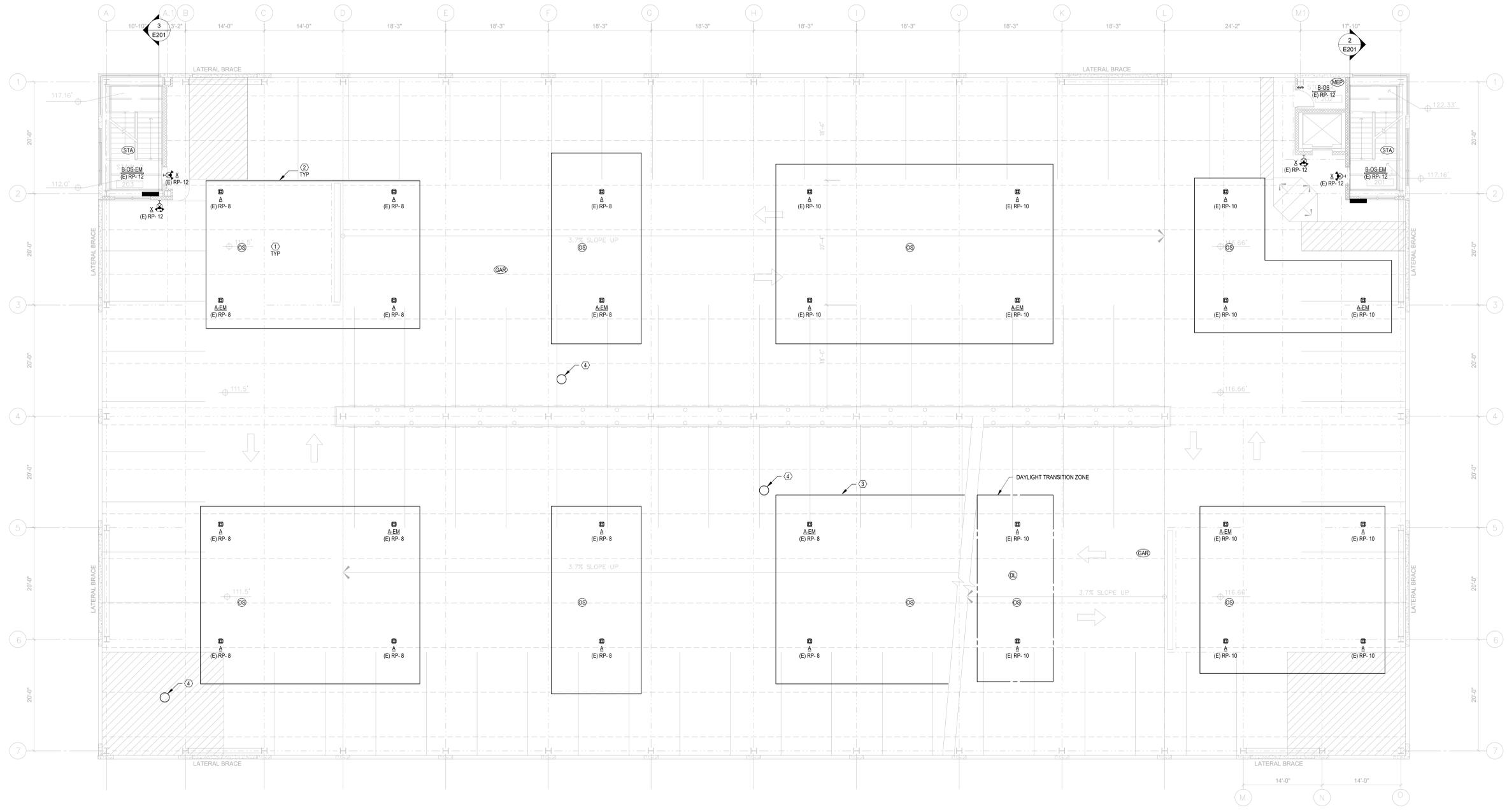
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 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
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 Drawn By: HSZ
 Checked By: JPR

Sheet Name:
LEVEL 2 POWER PLAN

Sheet No:
E202
 SHEET 55 OF 58

- KEYNOTES**
- 1 BASIS OF DESIGN FOR OCCUPANCY SENSORS LOCATION IS BASED ON WATTSTOPPER CI-300 EXTENDED RANGE LENS OCCUPANCY SENSOR. FINAL LOCATIONS AND QUANTITY OF OCCUPANCY SENSORS SHALL BE DETERMINED BASED ON FINAL OCCUPANCY DEVICE CHOSEN.
 - 2 THE OCCUPANCY SENSOR WITHIN THIS ZONE CONTROLS ALL LIGHTS WITHIN THIS ZONE.
 - 3 CONTINUATION OF THIS ZONE IS SHOWN ON E202.
 - 4 REPAIR AND/OR REPLACE ANY DAMAGED CONDUIT AND WIRE WHERE EXPLORATORY CORE SAMPLING OCCURRED. APPROXIMATE LOCATION SHOWN ON DRAWING. VERIFY IN FIELD.

- GENERAL SHEET NOTES**
1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
 2. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT TO IDENTIFY IF PHASED CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS IS NEEDED.
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 6. EXPOSED ABANDONED RACEWAY SHALL BE REMOVED.
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 11. CONDUIT RACEWAY SHALL MATCH EXISTING. RACEWAY SHALL BE MINIMUM GALVANIZED EMT, AND RIGID GALVANIZED SHALL BE USED WHERE POTENTIALLY SUBJECT TO PHYSICAL DAMAGE.



1 LEVEL 3 POWER PLAN
E203
1/8" = 1'-0"

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PENNONI ASSOCIATES INC.
1085 RAYMOND BOULEVARD
SUITE 2102
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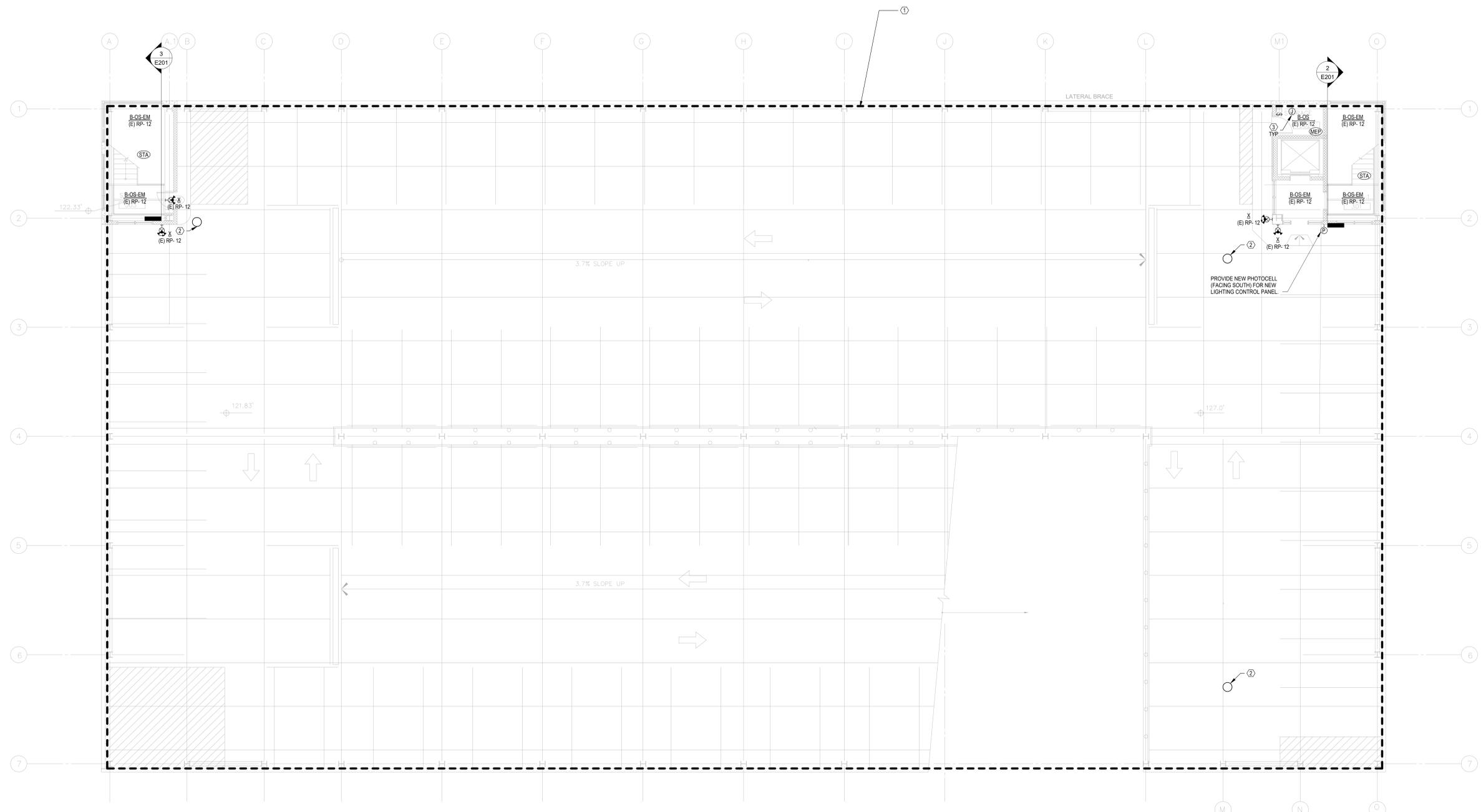
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PLAINFIELD, NJ
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Project No: DIGAX25005
Date: 11/03/25
Drawn By: HSZ
Checked By: JPR

Sheet Name:
LEVEL 3 POWER PLAN

Sheet No:
E203
SHEET 56 OF 58

- KEYNOTES**
- 1 REINSTALL AND RECONNECT ALL POLE LIGHTS UPON COMPLETION OF STRUCTURAL WORK.
 - 2 REPAIR AND/OR REPLACE ANY DAMAGED CONDUIT AND WIRE WHERE EXPLORATORY CORE SAMPLING OCCURED. APPROXIMATE LOCATION SHOWN ON DRAWING. VERIFY IN FIELD.
 - 3 PROVIDE NEW COVER PLATE FOR OPEN ELECTRICAL JUNCTION BOX. VERIFY ALL LOCATIONS ON ALL FLOORS IN FIELD.

- GENERAL SHEET NOTES**
1. COORDINATE ELECTRICAL WORK AND FINAL LOCATION OF ALL LIGHTING FIXTURES WITH ALL OTHER TRADES. PROVIDE COORDINATED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF WORK.
 2. COORDINATE WITH OTHER TRADES AND BUILDING MANAGEMENT TO IDENTIFY IF PHASED CONSTRUCTION TO MAINTAIN FACILITY OPERATIONS IS NEEDED.
 3. PROVIDE TYPED PANEL BOARD DIRECTIONS TO REFLECT AS-CONSTRUCTED CONDITIONS VERIFY DURING CONSTRUCTION AND REVISE ACCORDINGLY.
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 5. PROVIDE CUTTING, PATCHING, AND RESTORATION OF FINISHES NECESSARY FOR WORK SURFACES DAMAGED BY THIS WORK AND SPACES AROUND CONDUITS PASSING THROUGH FLOORS AND WALLS SHALL BE NEATLY PATCHED AND FINISHED TO MATCH NEW EXISTING. STRUCTURAL MEMBERS SHALL NOT BE CUT OR PENETRATED IN ANY MANNER. THE SPACES AROUND THE CONDUITS SHALL BE SEALED TO PREVENT ENTRANCE OF MOISTURE. PROVIDE FIRE STOPPING PER UL APPROVED METHODS.
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1
E204
LEVEL 4 POWER PLAN
1/8" = 1'-0"

No.	Date	Description
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Revisions / Issues		

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Project No: DIGAX25005
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Checked By: JPR

Sheet Name:
LEVEL 4 POWER PLAN

Sheet No:
E204
SHEET 57 OF 58

LIGHTING FIXTURE SCHEDULE										
FIXTURE	QUANTITY	MANUFACTURER	CATALOG NO.	LUMENS	WATTAGE	VOLTAGE	COLOR TEMP.	MOUNTING	DESCRIPTION	NOTES
A	55	RAB	PRT105N	12076 LM	105 W	120-277 V	4000K	CEILING	ULTRA-HIGH EFFICIENCY LED LARGE GARAGELIGHT FIXTURE, SUITABLE FOR WET LOCATIONS	
A-EM	20	RAB	PRT105NE	12076 LM	105 W	120-277 V	4000K	CEILING	ULTRA-HIGH EFFICIENCY LED LARGE GARAGELIGHT FIXTURE, SUITABLE FOR WET LOCATIONS	PROVIDE BATTERY BACKUP
B-EM	14	LITHONIA	ZL1N L48 7000LM FST MVOLT 35K 80CRI ETW	6643 LM	62.07 W	120-277 V	3500K	CEILING	48" FROSTED DIFFUSER LINEAR FIXTURE, DAMP LOCATIONS	PROVIDE BATTERY BACKUP
B-OS-EM	15	LITHONIA	ZL1N L48 7000LM FST MVOLT 35K 80CRI ETW LBOZU	6643 LM	62.07 W	120-277 V	3500K	CEILING	48" FROSTED DIFFUSER LINEAR FIXTURE, DAMP LOCATIONS	PROVIDE BATTERY BACKUP AND 360 DEG LOW MOUNT OCCUPANCY SENSOR
B-OS	1	LITHONIA	ZL1N L48 7000LM FST MVOLT 35K 80CRI LBOZU	6643 LM	62.07 W	120-277 V	3500K	CEILING	48" FROSTED DIFFUSER LINEAR FIXTURE, DAMP LOCATIONS	PROVIDE 360 DEG LOW MOUNT OCCUPANCY SENSOR
C-EM	2	CURRENT	LNC2-48L-25-4K7-4W-UNV-X-E	2863 LM	25 W	120-277 V	4000K	WALL	SMALL OUTDOOR WALLPACK WITH TYPE 4W	PROVIDE BATTERY BACKUP
X	17	MAXLITE	EXC-RW-WL	63 LM	2W	120-277 V	-	WALL	RED EXIT SIGN WITH 2-HEAD EMERGENCY LIGHTS, BATTERY BACKUP, WET LOCATIONS	

Panelboard: (E) RP															
Location: Supply: Mounting: Surface Enclosure: NEMA 1				Voltage: 208 V, 3Ø, 4W Bus Rating: 225 A Neutral: 100% Feed-Thru Lugs: No Features & Modifications: -				Mains Type: MCB Mains Rating: 200 A Mains FN/Note: - SCCR: 10 kA							
Ckt	Description	Wire Size	Trip (A)	Poles	FN/Note	Phase A Load (VA)	Phase B Load (VA)	Phase C Load (VA)	FN/Note	Poles	Trip (A)	Wire Size	Description	Ckt	
1	(E) PIT LIGHT - RECP.	1-#12, 1-#12, 1-#12	20	1	--	200	1260			1	20	1-#12, 1-#12, 1-#12	(N) LVL 1 LTS	2	
3	(E) SUMP PUMP PIT	1-#12, 1-#12, 1-#12	20	1	--		750	1470		1	20	1-#12, 1-#12, 1-#12	(N) LVL 2.1 LTG	4	
5	(E) GFI MACHINE RM	1-#12, 1-#12, 1-#12	20	1	--			180	840	1	20	1-#12, 1-#12, 1-#12	(N) LVL 2.2 LTG	6	
7	(E) CAB LIGHTS	1-#12, 1-#12, 1-#12	20	1	--	200	1050			1	20	1-#12, 1-#12, 1-#12	(N) LVL 3.1 LTG	8	
9	(E) GUARD SHED	2-#10, 1-#10, 1-#10	30	2	--		2496	1050		1	20	1-#12, 1-#12, 1-#12	(N) LVL 3.2 LTG	10	
11								2496	1076	1	20	1-#12, 1-#12, 1-#12	(N) STAIRS, STORAGE, AND MEP LIGHTS	12	
13						500	50			1	20	1-#12, 1-#12, 1-#12	(N) EXTERIOR LIGHTING	14	
15	(E) GARAGE DOOR	3-#12, 1-#12, 1-#12	20	3	--		500	500		1	20	1-#12, 1-#12, 1-#12	(N) LIGHTING CONTROL PANEL	16	
17								500	0	--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	18
19	(E) HEATER MACHINE RM	2-#10, 1-#10, 1-#10	30	2	--	2496	0			--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	20
21							2496	0		--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	22
23	(E) HEATER ELECTRIC RM	2-#10, 1-#10, 1-#10	30	2	--			2496	0	--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	24
25						2496	0			--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	26
27	(E) SPARE	1-#12, 1-#12, 1-#12	20	1	--		0	0		--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	28
29								0	0	--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	30
31	(E) TVSS	3-#10, 1-#10, 1-#10	30	3	--	0	0			--	1	20	1-#12, 1-#12, 1-#12	(E) SPARE	32
33							0	1500		1	1	20	1-#12, 1-#12, 1-#12	(E) POLE LIGHTS	34
35	(E) QUAD OUTLETS PANEL RM	1-#12, 1-#12, 1-#12	20	1	--			360	1500	1	1	20	1-#12, 1-#12, 1-#12	(E) POLE LIGHTS	36
37	(E) LIGHT CONTACTOR	1-#12, 1-#12, 1-#12	20	1	--	150	500			--	1	20	1-#12, 1-#12, 1-#12	(E) CALL SYSTEM	38
39	(E) SPARE	1-#12, 1-#12, 1-#12	20	1	--		0	500		--	1	20	1-#12, 1-#12, 1-#12	(E) FA PNL	40
41	(E) ELECTRIC RM LIGHTS	1-#12, 1-#12, 1-#12	20	1	--			100	180	--	1	20	1-#12, 1-#12, 1-#12	(E) GFI AT PNL	42
Connected Load:						9 kVA	11 kVA	10 kVA							
Connected Current:						74 A	95 A	82 A							
Load Classification		Connected	Factor	Demand											
Other		3500 VA	100.00%	3500 VA											
Lighting - Interior		6746 VA	125.00%	8433 VA											
Lighting - Exterior		50 VA	125.00%	63 VA											
						Panel Totals									
						Connected Load: 30 kVA									
						Connected Current: 83 A									
						Demand Load: 32 kVA									
						Demand Current: 88 A									

Notes:
(E) - EXISTING CIRCUIT, ESTIMATED LOADS
(N) - NEW CIRCUIT

- NOTE:**
- CONFIRM AND IDENTIFY EXISTING LIGHTING CIRCUITS TO REMAIN, INCLUDING CIRCUITS TO FEED POLE LIGHT ON ROOF, LIGHTS AND EXIT SIGNS OUTSIDE OF THE GARAGE AREA SUCH AS ELECTRICAL ROOM, STAIRS, ETC.
 - UTILIZE EXISTING CIRCUIT SERVING FOR NEW LIGHTING FIXTURES IF VERIFIED CIRCUIT IS IN ACCEPTABLE CONDITION TO BE RE-USED. CIRCUIT SHALL NOT SERVE MORE THAN 18 LIGHTS. PROVIDE NEW CIRCUITING FROM EXISTING PANEL "RP" IF EXISTING CIRCUIT CANNOT BE UTILIZED.

LIGHTING CONTROL SEQUENCE OF OPERATIONS						
DEVICES:						
<p>OCC = OCCUPANCY SENSOR TYPE - PROVIDE OCCUPANCY SENSOR(S) USING TECHNOLOGY INDICATED TO SERVE SPACE. PROVIDE TYPES AND QUANTITIES OF SENSORS AS NEEDED TO PROVIDE COVERAGE OVER A MINIMUM OF 90% OF SPACE SERVED. PROVIDE TYPES AND QUANTITIES OF POWER PACK/LOAD CONTROLLERS AS NEEDED TO CONTROL NUMBER OF ZONES AS INDICATED ON PLANS. SENSORS SHALL BE CEILING MOUNTED UNLESS SPECIFICALLY INDICATED AS WALL MOUNTED SENSORS ON PLANS.</p> <p>PIR = PASSIVE INFRARED US = ULTRASONIC/MICROPHONIC DI = DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC/MICROPHONIC) N = NO OCCUPANCY SENSOR REQUIRED</p> <p>PHOTO = DAYLIGHT HARVESTING PHOTOCELL - PROVIDE PHOTOCELL TO ENABLE DAYLIGHT HARVESTING. WHERE LOCATION(S) OF OCCUPANCY SENSOR(S) ARE APPROPRIATE, PHOTOCELLS MAY BE INTEGRAL TO OCCUPANCY SENSOR(S). Y = SPACE SHALL INCLUDE PHOTOCELL(S) TO PROVIDE DAYLIGHT HARVESTING OF ZONE(S) AS INDICATED ON PLANS. N = NO PHOTOCELL REQUIRED</p> <p>NETWORK = NETWORK CONNECTION TO SYSTEM HEAD-END - PROVIDE LOW VOLTAGE CABLING AS REQUIRED TO CONNECT SPACE TO SYSTEM HEAD-END, ALLOWING FOR SCHEDULED CONTROL FROM SYSTEM TIME CLOCK, REMOTE CONTROL AND MONITORING, AND REMOTE PROGRAMMING. Y = SPACE SHALL BE CONNECTED TO SYSTEM HEAD-END N = CONNECTION TO SYSTEM HEAD-END NOT REQUIRED</p> <p>UL924 = EGRESS LIGHTING WITHIN SPACE SHALL BE CONTROLLED ALONG WITH SPACE LIGHTING PER SEQUENCE OF OPERATIONS. PROVIDE UL924 RELAY PER SPECIFICATIONS FOR CODE REQUIRED OVERRIDE CONTROL OF CONTROLLED EGRESS LIGHTING. WHERE MULTIPLE LIGHTING BRANCH CIRCUITS SERVE THE SAME CONTROL ZONE, PROVIDE QUANTITY OF RELAYS AS REQUIRED TO ACCOMMODATE ZONES/CIRCUITS SERVED. Y = UL924 RELAY REQUIRED N = UL924 RELAY NOT REQUIRED (EITHER NO EGRESS LIGHTING OR EGRESS LIGHTING IS 24 HOUR)</p>						
SPACE TYPE	TAG	OCC	PHOTO	NETWORK	UL924	SEQUENCE OF OPERATIONS
MECHANICAL/ELECTRICAL	MEP	N	N	N	Y	WALL DEVICE: ALLOW FOR ON/OFF CONTROL NO AUTOMATIC LIGHTING CONTROLS IN THIS SPACE
SUPPORT / STORAGE	STO	DT	N	N	N	AUTOMATIC ON: UPON OCCUPANCY DETECTION, LIGHTS ON WALL DEVICE: ALLOW FOR ON/OFF CONTROL AUTOMATIC OFF: 5 MINUTE DELAY, LIGHTS OFF
GARAGE	GAR	DT	Y	Y	Y	SCHEDULE ON HOURS: LIGHTS ON FROM 6AM TO 8PM SCHEDULE OFF HOURS: LIGHTS OFF FROM 8PM TO 6AM SCHEDULE DIM HOURS: LIGHTS TO 50% FROM 15 MINUTES AFTER DAWN TO 15 MINUTES BEFORE DUSK AUTOMATIC ON (DURING SCHEDULE OFF HOURS): UPON OCCUPANCY DETECTION, LIGHTS ON AUTOMATIC OFF (DURING SCHEDULE OFF HOURS): 20 MINUTE DELAY, LIGHTS OFF DAYLIGHT TRANSITION ZONE (DURING SCHEDULED ON HOURS): LIGHT ON DAYLIGHT TRANSITION ZONE AUTOMATIC ON (DURING SCHEDULED OFF HOURS): LIGHT TO 50% MAXIMUM OF LIGHT LEVEL
STAIRS	STA	DT	Y	Y	Y	SCHEDULE ON HOURS: LIGHTS ON FROM 6AM TO 8PM SCHEDULE OFF HOURS: LIGHTS OFF FROM 8PM TO 6AM SCHEDULE DIM HOURS: LIGHTS TO 50% FROM 15 MINUTES AFTER DAWN TO 15 MINUTES BEFORE DUSK AUTOMATIC ON (DURING SCHEDULE OFF HOURS): UPON OCCUPANCY DETECTION, LIGHTS ON AUTOMATIC OFF (DURING SCHEDULE OFF HOURS): 20 MINUTE DELAY, LIGHTS OFF DAYLIGHT ZONE (DURING SCHEDULED ON HOURS): LIGHTS TO A MAXIMUM 20% OF LIGHT LEVEL EACH STAIRWELL IS CONSIDERED ONE OCCUPANCY AND DAYLIGHT ZONE. OCCUPANCY SENSOR(S) AND DAYLIGHT SENSOR(S) TO CONTROL ALL LIGHTS IN ONE STAIRWELL.
EXTERIOR	EXT	N	N	Y	Y	SCHEDULE ON: LIGHTS TO 100% AT 15 MINUTES PRIOR TO DUSK LIGHTING SETBACK: LIGHTS TO 50% AT 9:00 PM, RETURN TO 100% AT 5:00 AM SCHEDULE OFF: LIGHTS OFF AT 15 MINUTES AFTER DAWN
LIGHTING CONTROL SEQUENCE OF OPERATIONS NOTES						
<p>1. COORDINATE EXACT BUSINESS HOURS AND ASSOCIATED CONTROL SCHEDULES WITH OWNER.</p> <p>2. BASIS OF DESIGN IS BASED ON 2019 ASHRAE 90.1.</p>						

0 01/07/2025 ISSUED FOR BID
 No. Date Description
 Revisions / Issues

DIGroupArchitecture
 ARCHITECTURE FOR CHANGE

15 Bethany Street • New Brunswick, NJ 08901 • T: 732.240.6242
 2450 W Hunting Park Ave, Bldg 9 • Philadelphia, PA 19129-1302 •
 T: 215.634.3400

PENNONI ASSOCIATES INC.
 1085 RAYMOND BOULEVARD
 SUITE 2102
 NEWARK, NJ 07102
 T 973.265.9775 F 973.265.9774
 NJ COA NO. GA28033300

JOHN P. RENGEPIUS
 NJ PE 24GE06010200

DO NOT SCALE. DRAWING MAY BE PRINTED AT REDUCED SCALE. CONSULT WITH ARCHITECT FOR DIMENSIONS.

Client:
 UNION COUNTY
 IMPROVEMENT AUTHORITY
 10 Elizabethtown Plaza - 5th Floor
 Elizabeth, NJ 0720710

Project:
 GERRY B. GREEN PLAZA PARKING
 GARAGE REPAIRS

Block 246 / Lot 1
 200 WEST 2ND STREET
 PLAINFIELD, NJ
 Drawing Information:
 Project No: DIGAX25005
 Date: 11/03/25
 Drawn By: HSZ
 Checked By: JPR

Sheet Name:
ELECTRICAL SCHEDULES

Sheet No:

E500
 SHEET 58 OF 58