

# THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY  
UNITS

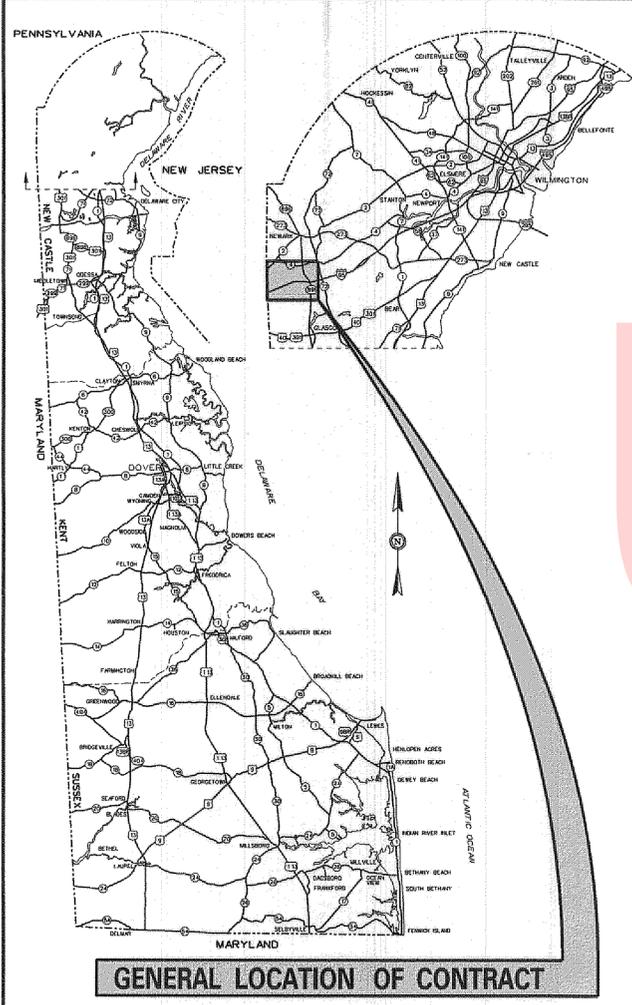


CONSTRUCTION PLANS FOR:

## NEWARK TOLL PLAZA I95 TUNNEL STAIRS REPLACEMENT

CONTRACT NUMBER: T201650002  
FEDERAL AID PROJECT NUMBER: N/A

COUNTY: NEW CASTLE M.R. #: N/A



**GENERAL LOCATION OF CONTRACT**

PREPARED BY  
THE CONSULTING FIRM OF



**JOHNSON, MIRMIAN & THOMPSON**  
Engineering A Brighter Future®

121 Continental Drive, Suite 300 Newark, DE 19713



SEAL

*[Signature]*  
RECOMMENDED

05/17/2016  
DATE

**RECOMMENDED**

*[Signature]* 5/20/16  
CHIEF OF TOLL OPERATIONS DATE

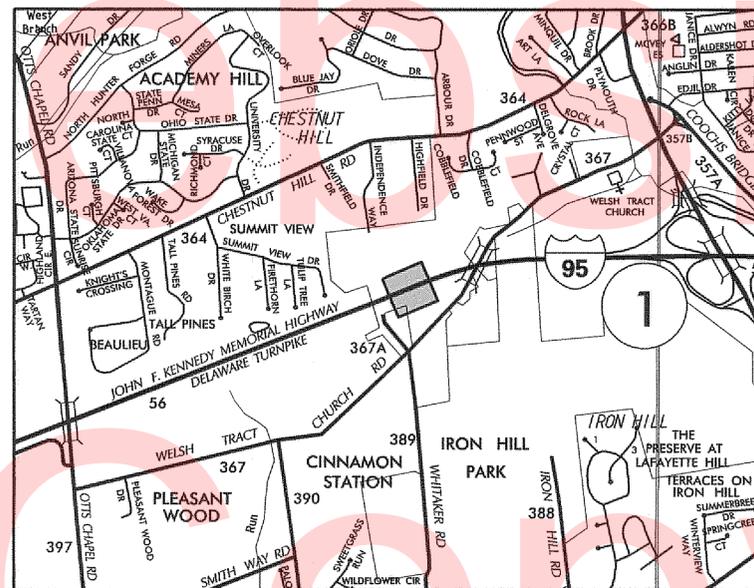
*[Signature]* 5/20/16  
STATEWIDE SUPPORT SERVICES ENGINEER DATE

*[Signature]* 5/20/16  
ASSISTANT DIRECTOR STATEWIDE SUPPORT SERVICES DATE

*[Signature]* 5/20/16  
DIRECTOR, MAINTENANCE & OPERATIONS DATE

**PROJECT NOTES:**

1. NO UTILITY RELOCATION INVOLVEMENT IS ANTICIPATED. SHOULD ANY CONFLICTS BE ENCOUNTERED DURING CONSTRUCTION REQUIRING ADJUSTMENT AND/OR RELOCATION OF THE AGENCIES' EXISTING FACILITIES, THE NECESSARY RELOCATION WORK SHALL BE ACCOMPLISHED BY THE RESPECTIVE AGENCIES' FORCES AS DIRECTED BY THE DISTRICT ENGINEER. ANY ADJUSTMENTS AND/OR RELOCATIONS OF MUNICIPALLY OWNED FACILITIES SHALL BE DONE BY THE STATE'S CONTRACTOR IN ACCORDANCE WITH THE RESPECTIVE AGENCIES' STANDARD SPECIFICATIONS AS DIRECTED BY THE DISTRICT ENGINEER.
2. NO ENVIRONMENTAL PERMITS ARE REQUIRED FOR THIS WORK PROVIDED NO JURISDICTIONAL WETLANDS OR WATERS ARE IMPACTED. IF THERE IS ANY QUESTION AS TO WHETHER OR NOT A WATER OR WETLAND IS JURISDICTIONAL, CONTACT THE DELDOT ENVIRONMENTAL SECTION AT 302-760-2254.
3. IT IS ANTICIPATED THAT ALL WORK WILL OCCUR WITHIN DELDOT'S EXISTING RIGHT OF WAY OR EASEMENTS.
  - A. SHOULD THE NEED OCCUR TO TRESPASS ONTO PRIVATE PROPERTY, IT WILL BE THE RESPONSIBILITY OF THE PROJECT MANAGER TO SECURE SUCH TRESPASS NEEDS.
  - B. SHOULD THE NEED OCCUR TO TRESPASS ONTO RAILROAD PROPERTY INCLUDING THE HIGHWAY-RAIL CROSSING, IT WILL BE THE RESPONSIBILITY OF THE PROJECT MANAGER TO CONTACT THE RAILROAD CHIEF ENGINEER AND OBTAIN WRITTEN AUTHORIZATION BEFORE ENTERING.
4. THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR COORDINATION WITH THE TRAFFIC SECTION RELATING TO ANY IMPACTS TO TRAFFIC FACILITIES (INCLUDING BUT NOT LIMITED TO TRAFFIC LOOPS, JUNCTION WELLS ETC.) AT LEAST 4 WEEKS IN ADVANCE OF THE START OF THE ACTIVITY. PRIOR TO INITIATING ANY WORK ON THIS CONTRACT (OR SITES), THE PROJECT MANAGER SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING FOR APPROVAL TO THE SAFETY SECTION, A MAINTENANCE OF TRAFFIC PLAN. SUFFICIENT TIME SHALL BE PROVIDED FOR THE REVIEW AND APPROVAL OF THE PLAN. THE MAINTENANCE OF TRAFFIC PLAN SHALL INCLUDE PROPOSED TIME RESTRICTIONS ON THE CLOSURE OF TRAVEL LANES SUBJECT TO THE APPROVAL OF THE SAFETY SECTION.
5. THE PROJECT MANAGER IS RESPONSIBLE FOR ENSURING ANY REQUIRED DOCUMENTS AND ANALYSIS AS PART OF THE ADOPTED WORK SAFETY AND MOBILITY PROCEDURES AND GUIDELINES HAS BEEN COMPLETED PRIOR TO ANY WORK STARTING ON THIS CONTRACT.



**LOCATION MAP**

SCALE: N.T.S.

**DESIGN DESIGNATION**

FUNCTIONAL CLASS: N/A	D.H.V. PROJECTED: N/A	YEAR: N/A
TYPE OF CONSTRUCTION: N/A	DESIGN SPEED: N/A	
A.A.D.T. CURRENT: N/A	YEAR: N/A	TRUCKS: N/A
A.A.D.T. PROJECTED: N/A	YEAR: N/A	DIRECTION OF DISTRIBUTION: N/A

**INDEX OF SHEETS**

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TOTAL SHEETS: 11

**APPROVED DESIGN EXCEPTIONS**

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

**ADDENDA & REVISIONS**

DESCRIPTION	NAME & DATE

**ASSOCIATED CONTRACTS**

CONTRACT NO.	CONTRACT NAME
29-090-02	I-95 NEWARK TOLL PLAZA HIGHWAY SPEED E-ZPASS LANES VOLUME 2 OF 3
7005	DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE
7052	DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE
7059	DELAWARE STATE HIGHWAY DEPARTMENT DELAWARE TURNPIKE
7485	DELAWARE TURNPIKE TOLL PLAZA EXPANSION AND LANE WIDENING
96-090-01	I-95 TOLL PLAZA REHABILITATION

DATE: 5/17/2016  
FILE LOCATION: G:\NDE\120985-01\I-95-TOLL PLAZA-STAY-CAD\DOT.CADD [ SHEET: T001 ]

<p><b>RECOMMENDED</b></p> <p>STORMWATER ENGINEER</p> <p>DATE _____ SEAL _____</p>	<p><b>RECOMMENDED AS TO PROCESS</b></p> <p><i>[Signature]</i> CHIEF ENGINEER</p> <p>DATE 5/20/16 SEAL _____</p>	<p><b>RECOMMENDED</b></p> <p>BRIDGE DESIGN ENGINEER</p> <p>DATE _____ SEAL _____</p>	<p><b>RECOMMENDED</b></p> <p>GROUP ENGINEER, PROJECT DEVELOPMENT</p> <p>DATE _____ SEAL _____</p>	<p><b>RECOMMENDED</b></p> <p>ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS</p> <p>DATE _____ SEAL _____</p>	<p><b>APPROVED</b></p> <p>CHIEF ENGINEER</p> <p>DATE _____ SEAL _____</p>
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STRUCTURAL GENERAL NOTES

GENERAL:

TEMPORARY CONSTRUCTION SYSTEMS SUCH AS AND INCLUDING, BUT NOT LIMITED TO, SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIE-DOWNS THAT MIGHT BE NECESSARY TO MAINTAIN THE STABILITY OF ANY PART OF THE STRUCTURE DURING CONSTRUCTION OPERATIONS, ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. IF THEY ARE APPLIED BY THE CONTRACTOR, THEY ARE THE CONTRACTOR'S RESPONSIBILITY AND THEY SHALL BE REMOVED AS CONDITIONS PERMIT AND SHALL REMAIN THE CONTRACTOR'S PROPERTY.

THE ENGINEER HAS NO EXPERTISE IN, AND TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. PROCESSING AND/OR APPROVING SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED, SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OR ANY RESPONSIBILITY FOR SAFETY PROCEDURES.

IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASE OF CONSTRUCTION. THE ENGINEER IS NOT ENGAGED IN, AND DOES NOT SUPERVISE CONSTRUCTION.

THE AREA IS CURRENTLY IN USE AND WILL REMAIN SO DURING CONSTRUCTION. THE CONTRACTOR SHALL:

- COORDINATE WORKING HOURS WITH DELDOT TO MINIMIZE DISRUPTION TO THE FACILITY.
- PERFORM ALL TASK IN SUCH A MANNER AS TO HOLD DUST AND DIRT DISPERSION AND ACCUMULATION TO A MINIMUM AND PROTECT ADJACENT TO BOOTHS, STAIRS, AND TRAFFIC LANES FROM DUST AND DIRT.
- ALL EQUIPMENT AND MATERIALS SHALL BE STORED WITHIN DESIGNATED AREAS AS ASSIGNED BY DELDOT, AT THE END OF EACH WORK DAY, CLEAN UP AND REMOVE ALL MATERIALS FROM THE WORK SITE AND STORE IN THE DESIGNATED AREAS. THE CONTRACTOR IS RESPONSIBLE FOR THEIR STORED EQUIPMENT AND MATERIAL.
- ALL CONTRACTOR AND SUBCONTRACTOR PERSONNEL, VEHICLES, EQUIPMENT, AND MATERIALS SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION AND WITHIN THE SITE ACCESS AND HAUL ROUTES AND DESIGNATED BY DELDOT.
- THE CONTRACTOR SHALL NOT AFFECT DELDOT OPERATIONS OR SURROUNDING TRAFFIC AT ANY TIME.
- STAGING OF WORK OR PLACEMENT OF EQUIPMENT OR MATERIALS IN AREAS OTHER THAN AS DESIGNATED WHICH WOULD INTERFERE WITH DELDOT OPERATIONS ON TRAFFIC REQUIRES COORDINATION AND APPROVAL FROM DELDOT.
- THE ADJACENT TOLL BOOTHS, STAIRS, AND TRAFFIC LANES WILL BE CONTINUOUSLY IN USE DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR'S WORK SHALL NOT AFFECT THE USE, OR OBSTRUCT THE ADJACENT TOLL BOOTHS, STAIRS, AND TRAFFIC LANES.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRIERS AROUND THE PERIMETER OF THE WORK AREA TO PREVENT THE DISPERSION OR BUILD UP OF DUST AND DEBRIS AND PROTECT ADJACENT TOLL BOOTHS, STAIRS, AND TRAFFIC LANES.

DESIGN CODES AND SPECIFICATIONS:

- 2012 INTERNATIONAL BUILDING CODE (IBC 2012).
- AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2010 ED. (ASCE7-10)
- AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 2014 ED. (ACI 318-14)
- INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI)

EXISTING CONDITIONS:

THE CONTRACTOR IS ADVISED THAT ALL PLANS, DIMENSIONS AND DETAILS OF EXISTING CONSTRUCTION HAVE BEEN TAKEN FROM THE BEST AVAILABLE PLANS. THE CONTRACTOR SHALL VERIFY BY FIELD SURVEY AND MEASUREMENT ALL PLANNED DIMENSIONS OF NEW CONSTRUCTION IN RELATION TO EXISTING CONSTRUCTION ELEVATIONS AND DIMENSIONS PRIOR TO THE START OF WORK AND/OR THE PREPARATION OF SHOP DRAWINGS. ANY DEVIATIONS IN PLANNED DIMENSIONS FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO PROCEEDING WITH THE WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR ACCURACY OF THE EXISTING CONDITION INFORMATION.

EXISTING RECORD DRAWINGS SHOWING THE EXISTING CONSTRUCTION ARE AVAILABLE FROM DELDOT FOR REFERENCE AS FOLLOWS:

- "DELAWARE STATE HIGHWAY DEPARTMENT, DELAWARE TURNPIKE, JOHN F. KENNEDY MEMORIAL HIGHWAY, CONSTRUCTION CONTRACT NO. 7052," 03/07/69, RECORD DRAWINGS TRANSFER.

UTILITIES:

- PROTECTION: PROTECT EXISTING UTILITIES TO REMAIN DURING CUTTING AND PATCHING TO PREVENT DAMAGE.
- TAKE ALL PRECAUTIONS NECESSARY TO AVOID CUTTING EXISTING PIPE, CONDUIT, OR DUCTWORK SERVING THE BUILDING UNTIL PROVISIONS HAVE BEEN MADE TO BYPASS THEM. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO DELDOT.
- DAMAGES: PROMPTLY REPAIR DAMAGES TO DELDOT'S SATISFACTION CAUSED TO ADJACENT FACILITIES BY DEMOLITION WORK AT NO COST TO DELDOT.
- DISPOSAL OF DEMOLISHED AND INSTALLATION MATERIALS: REMOVE DEBRIS, INSTALLATION DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION AND NEW INSTALLATION OPERATIONS FROM BUILDING SITE. TRANSPORT AND LEGALLY DISPOSE OF MATERIALS OFF SITE.
- IF UNANTICIPATED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS WHICH CONFLICT WITH THE INTENDED CONSTRUCTION, FUNCTION OR DESIGN ARE ENCOUNTERED, INVESTIGATE AND MEASURE BOTH NATURE AND EXTENT OF THE CONFLICT. SUBMIT REPORT TO DELDOT'S REPRESENTATIVE IN WRITTEN, ACCURATE DETAIL. PENDING RECEIPT OF DIRECTIVE FROM THE DELDOT REPRESENTATIVE, REARRANGE SCHEDULE AS NECESSARY TO CONTINUE OVERALL JOB PROGRESS WITHOUT DELAY.

DEMOLITION:

- PROTECTION: PROTECT EXISTING CONSTRUCTION TO REMAIN DURING REMOVAL, CUTTING AND PATCHING TO PREVENT DAMAGE.
- CUTTING: CUT EXISTING CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS TO BE RETAINED OR ADJOINING CONSTRUCTION. IN GENERAL WHERE CUTTING IS REQUIRED, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. CUT HOLES AND SLOTS NEATLY TO SIZE REQUIRED WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. CUT THROUGH CONCRETE USING A CUTTING MACHINE SUCH AS A CARBORUNDUM SAW OR DIAMOND CORE DRILL.
- CUT OFF PIPE OR CONDUIT IN WALLS TO BE REMOVED. CAP VALVE OR PLUG AND SEAL THE REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRANCE OF MOISTURE OR OTHER FOREIGN MATTER AFTER BY-PASSING AND CUTTING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES THAT ARE INVOLVED IN THE DEMOLITION ACTIVITIES AND COORDINATE THEIR REMOVAL OR RELOCATION WITH THE DELDOT REPRESENTATIVE.
- DAMAGES: PROMPTLY REPAIR DAMAGES TO OWNER'S SATISFACTION CAUSED TO ADJACENT CONSTRUCTION BY DEMOLITION WORK AT NO COST TO DELDOT.
- DISPOSAL OF DEMOLISHED MATERIALS: REMOVE DEBRIS, INSTALLATION DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS FROM BUILDING SITE. TRANSPORT AND LEGALLY DEPOSE OF MATERIALS OFF SITE.

SHOP DRAWINGS:

SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. ALL CONTRACTOR MODIFICATIONS (INCLUDING PRODUCT SUBMISSIONS) MUST BE IDENTIFIED IN WRITING AS PROPOSED "AS EQUAL" CHANGES AT THE TIME OF SUBMISSION. IF CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS OR FAILS TO FOLLOW THE ABOVE "AS EQUAL" PROCEDURE, THE FIRM OF JMT CONSULTANTS, INC. WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.

OWNERSHIP OF DOCUMENTS:

THE CONTRACTOR ACKNOWLEDGES THESE PLANS AND SPECIFICATIONS PREPARED BY JMT AS INSTRUMENTS OF PROFESSIONAL SERVICE. NEVERTHELESS, THE PLANS AND SPECIFICATIONS PREPARED UNDER THIS AGREEMENT SHALL BECOME THE PROPERTY OF DELDOT AND THE JMT. UPON COMPLETION OF THE WORK, THE CONTRACTOR AGREES TO HOLD HARMLESS AND INDEMNIFY AGAINST ALL DAMAGES, CLAIMS, AND LOSSES, INCLUDING DEFENSE COSTS, ARISING OUT OF ANY REUSE OF THE PLANS AND SPECIFICATIONS WITHOUT THE WRITTEN AUTHORIZATION OF DELDOT AND JMT.

MISCELLANEOUS:

- CONTRACTOR SHALL VERIFY CONDITIONS IN THE FIELD AND NOTIFY ENGINEER IMMEDIATELY OF ANY CONDITIONS NOT AS SHOWN; CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AS REQUIRED AND BE RESPONSIBLE FOR SAME.
- CONTRACTOR SHALL COORDINATE WITH ALL RELATED TRADES FOR DETAILING, FABRICATION, AND ERECTION PRIOR TO SUBMITTING SHOP DRAWINGS FOR APPROVAL.
- NO OPENINGS SHALL BE MADE IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR AS APPROVED BY THE ENGINEER.

REINFORCING STEEL:

- ALL DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL CONFORM WITH THE ACI DETAILING MANUAL, ACI SP-66.
- REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE SHALL CONFORM TO ASTM A 615, GRADE 60.
- MINIMUM CONCRETE PROTECTION FOR ALL REINFORCING STEEL SHALL BE 2 INCHES, UNLESS OTHERWISE NOTED.
- ALL REINFORCING BAR SPLICES SHALL BE CLASS B TENSION LAP SPLICES, IN ACCORDANCE WITH ACI 318-14, CHAPTER 25, UNLESS OTHERWISE NOTED.
- REINFORCING BAR SPLICES IN INCHES AS SHOWN.

LAP SPLICE SCHEDULE				
BAR SIZE	LAP CLASS	TOP BARS	BOTTOM BARS	OTHER BARS
#3	B	24"	20"	20"
#4	B	32"	25"	24"
#5	B	40"	31"	24"

NOTE: NO MORE THAN 50% OF THE REINFORCING STEEL TO BE SPLICED AT ANY GIVEN LOCATION UNLESS OTHERWISE APPROVED.

STRUCTURAL LIST OF SHEETS

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1	STRUCTURAL GENERAL NOTES
2	ABBREVIATIONS AND LEGEND
3	DEMOLITION PLANS, SECTIONS AND DETAILS - STAIR 17-20
4	DEMOLITION PLANS, SECTIONS AND DETAILS - STAIR 14-16
5	NEW CONSTRUCTION PLANS, SECTIONS AND DETAILS - STAIR 17 - 20
6	NEW CONSTRUCTION PLANS, SECTIONS AND DETAILS - STAIR 14-16
7	CONCRETE REPAIR NOTES AND DETAILS
8	PHOTOGRAPHS
9	PHOTOGRAPHS
10	SECTIONS AND DETAILS

CONCRETE:

ALL CONCRETE WORK SHALL CONFORM TO ALL THE PROVISIONS OF THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-14). ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. THE CONCRETE SHALL CONFORM TO ALL THE PROVISIONS OF THE "GUIDE TO HOT WEATHER CONCRETING" (ACI 305 R-10) AND THE "GUIDE TO COLD WEATHER CONCRETING" (ACI 306 R-10).

ALL FORMWORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "FORMWORK FOR CONCRETE" SPECIAL PUBLICATION NO. 4 AND ACI'S "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" (ACI-347-LATEST EDITION).

ALL CONCRETE SHALL CONSIST OF MAXIMUM AGGREGATE SIZE OF 3/4" AND HAVE AN AIR ENTRAINMENT OF 5.5% ± 1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. THE MAXIMUM SLUMP OF ALL CONCRETE SHALL BE 4 INCHES.

SLABS SHALL BE FINISHED TO A MINIMUM FLATNESS F-NUMBER FF = 20 AND A MINIMUM LEVELNESS F-NUMBER F1 = 17 IN ANY DIRECTION.

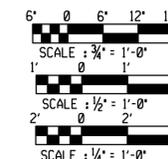
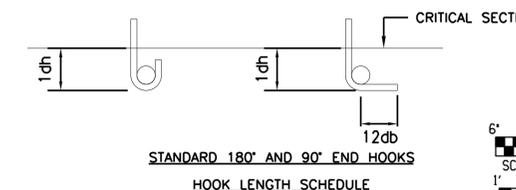
CURE CONCRETE ACCORDING TO ACI 308.1 WITH ABSORPTIVE COVER, WATER SATURATED AND KEPT CONTINUOUSLY WET. COVER CONCRETE SURFACES AND EDGES WITH 12-INCH LAP OVER ADJACENT ABSORPTIVE COVERS.

ONE SET OF COMPRESSIVE TEST CYLINDERS FOR EACH DAY'S POUR, ALONG WITH SLUMP TESTS SHALL BE PERFORMED BY THE CONTRACTOR'S TESTING LABORATORY APPROVED BY THE ENGINEER.

HOOK LENGTH SCHEDULE (F'C = 4,000 PSI)					
BAR SIZE	STANDARD 90° HOOK	STANDARD 180° HOOK		FINISH BEND DIAMETER	
	1dh	12db	1dh	4db	
#3	8"	5"	8"	2"	2 1/4"
#4	11"	6"	11"	2"	3"
#5	13"	8"	13"	3"	3 1/4"

NOTES:

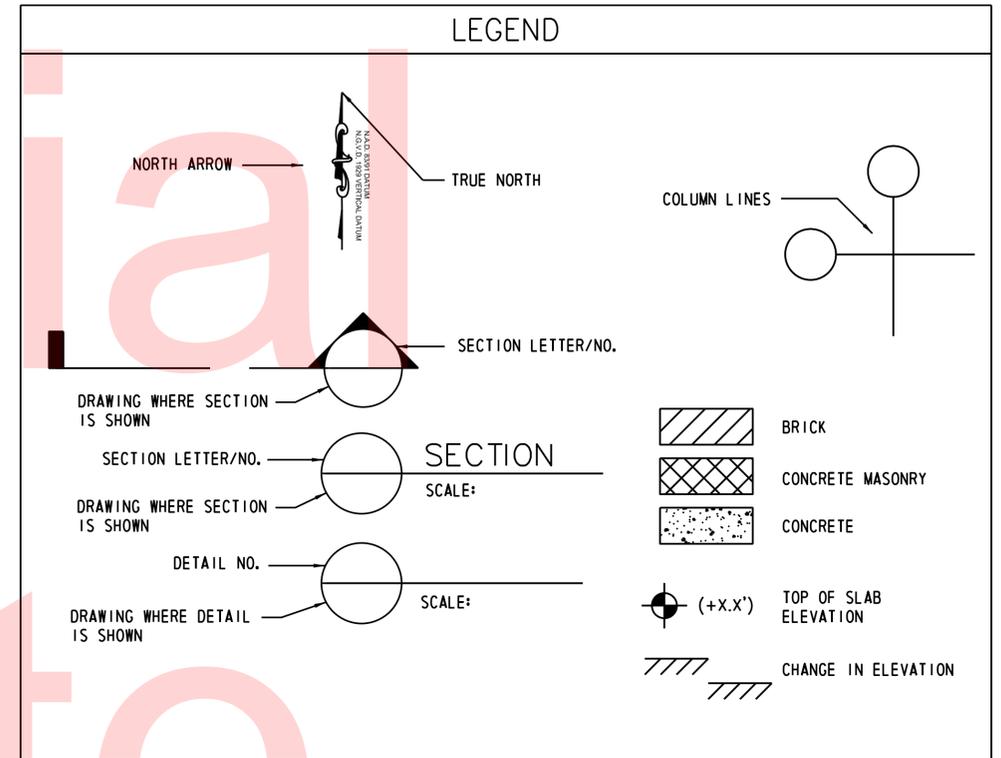
STANDARD HOOKS: SIDE COVER MORE THAN 2.5"  
END COVER (90° HOOK) MORE THAN 2"  
MINIMUM COVER TO TAIL = 2"



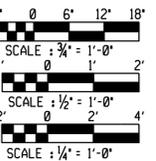
PLOTTED BY: MONITES DATE: 5/9/2016 FILE LOCATION: Q:\INDE\120995\_011\1-95\_TOLL\_PLAZA\_STAYCADD\PN.DGN [ SHEET: PN ]

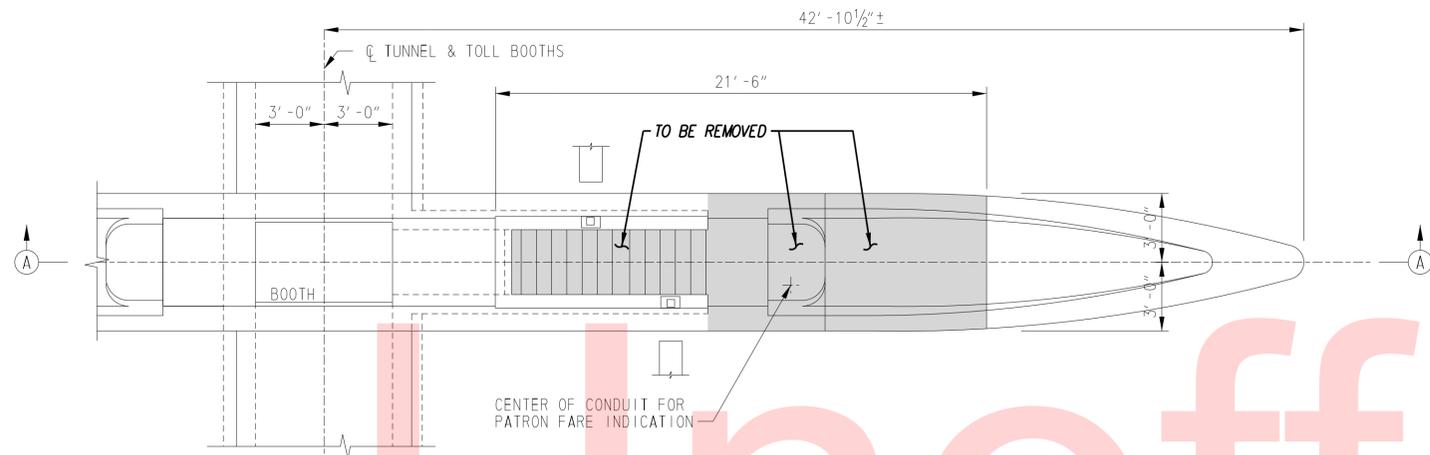
ABBREVIATIONS

<p> <b>A:</b> At  <b>AB:</b> Anchor Bolt; Asbestos Board  <b>ABV:</b> Above  <b>ACF:</b> Architectural Concrete Finish  <b>ACI:</b> American Concrete Institute  <b>ADD:</b> Addendum Addition  <b>ADDL:</b> Additional  <b>ADH:</b> Adhesive  <b>AF:</b> Above the Floor  <b>AFF:</b> Above Finished Floor  <b>AGG:</b> Aggregate  <b>AISC:</b> American Institute of Steel Construction  <b>ALUM:</b> Aluminum  <b>ALS:</b> Acrylic Latex Sealant  <b>AN:</b> Anode  <b>ANCH:</b> Anchor, Anchorage  <b>APPD:</b> Approved  <b>APPROX:</b> Approximate  <b>APRVD:</b> Approved  <b>ARCH:</b> Architect, Architectural  <b>ASPH:</b> Asphalt  <b>ASSY:</b> Assembly  <b>ASTM:</b> American Society for Testing Materials  <b>AVG:</b> Average  <b>AWS:</b> American Welding Society    <b>B/:</b> Bottom  <b>BAF:</b> Baffle  <b>BEL:</b> Below  <b>BET:</b> Between  <b>BETW:</b> Between  <b>BEV:</b> Bevel  <b>BHD:</b> Bulkhead  <b>BIT:</b> Bituminous  <b>BLDG:</b> Building  <b>BLK:</b> Block  <b>BM:</b> Beam, Bench Mark  <b>BOT:</b> Bottom  <b>BP:</b> Base Plate  <b>BPL:</b> Bearing Plate  <b>BRDG:</b> Bridge, Bridging  <b>BRG:</b> Bearing  <b>BRK:</b> Brick  <b>BUR:</b> Built-up Roof  <b>BVL:</b> Bevelled    <b>C/C:</b> Center to Center  <b>CAD:</b> Cadmium, Computer-Aided Drafting  <b>CAIS:</b> Caisson  <b>CCW:</b> Counter Clockwise  <b>C.I.:</b> Cast Iron  <b>CIR:</b> Circle, Circular  <b>CIRC:</b> Circumference  <b>CJ:</b> Control Joint  <b>CL:</b> Centerline  <b>CLR:</b> Clear  <b>CLR OPN:</b> Clear Opening  <b>CMP:</b> Corrugated Metal Pipe  <b>CMU:</b> Concrete Masonry Unit  <b>CNTR:</b> Center, Counter  <b>CO:</b> Company, Cleanout,  <b>CO &amp; DP:</b> Cleanout &amp; Deck Plate  <b>COEF:</b> Coefficient  <b>COL:</b> Column  <b>CONC:</b> Concrete  <b>CONST:</b> Construction  <b>CONSTR:</b> Construction  <b>CONT:</b> Continuous, Continue, Control  <b>CONTR:</b> Contractor  <b>CTR:</b> Center, Counter    <b>DEM:</b> Demolish  <b>DEMO:</b> Demolition  <b>DET:</b> Detail  <b>DIAG:</b> Diagonal  <b>DIA:</b> Diameter  <b>DIM:</b> Dimension  <b>DL:</b> Dead Load  <b>DMH:</b> Drop Manhole  <b>DN:</b> Down  <b>DR:</b> Drain  <b>DT:</b> Drain Tile  <b>DVTL:</b> Dovetail  <b>DWG:</b> Drawing  <b>DS:</b> Downspout    <b>E TO E:</b> End to End  <b>EA:</b> Each  <b>EB:</b> Expansion Bolt  <b>EE:</b> Each End  <b>EF:</b> Each Face  <b>EIFS:</b> Exterior Insulation and Finish System  <b>EJ:</b> Expansion Joint  <b>EL:</b> Elevation  <b>ELB:</b> Elbow  <b>ELEC:</b> Electrical  <b>ELECT:</b> Electrical  <b>ELEV:</b> Elevator, Elevation  <b>ENG:</b> Engineer  <b>ENGR:</b> Engineer  <b>EO:</b> Equal  <b>EQUIP:</b> Equipment  <b>EW:</b> Each Way  <b>EX:</b> Existing  <b>EXCAV:</b> Excavate  <b>EXP:</b> Expansion, Exposed  <b>EXT:</b> Exterior    <b>FBRK:</b> Fire Brick  <b>FD:</b> Floor drain  <b>FDN:</b> Foundation  <b>FF:</b> For Face, Finished Floor  <b>FFE:</b> Finished Floor Elevation  <b>FFL:</b> Finished Floor Line  <b>FHY:</b> Fire Hydrant  <b>FIL:</b> Fillet  <b>FIN:</b> Finish, finished  <b>FLG:</b> Floorng  <b>FOC:</b> Face of Concrete  <b>FOS:</b> Face of Studs  <b>FPRF:</b> Fireproof  <b>FRG:</b> Forged  <b>FRM:</b> Frame  <b>FRPF:</b> Fireproof  <b>FRT:</b> Fire Retardant  <b>FS:</b> Full Size, Far Side  <b>FSCW:</b> Flush Solid Core Wood  <b>FT:</b> Foot, Feet, Fully Tempered  <b>FTG:</b> Footing    <b>GA:</b> Gauge, Gage  <b>GALV:</b> Galvanized  <b>GC:</b> General Contractor  <b>GD:</b> Guard, Grade  <b>GEN:</b> General, Generator  <b>GRND:</b> Ground  <b>GRTC:</b> Grating  <b>GVL:</b> Gravel  <b>GYP:</b> Gypsum    <b>HGT:</b> Height  <b>HOR:</b> Horizontal  <b>HT:</b> Height  <b>HVAC:</b> Heating, Ventilating &amp; Air Conditioning  <b>HVY:</b> Heavy    <b>ID:</b> Inside Diameter  <b>INFO:</b> Information  <b>INT:</b> Interior, Internal    <b>JST:</b> Joist  <b>JT:</b> Joint    <b>KIP:</b> Kilopound (1000 pounds)  <b>KO:</b> Knockout  <b>KP:</b> Kickplate    <b>L:</b> Angle, Left, Length  <b>LAD:</b> Ladder  <b>LAT:</b> Lateral  <b>LB:</b> Pound (weight)  <b>LL:</b> Live Load  <b>LMS:</b> Limestone  <b>LN:</b> Length  <b>LNDG:</b> Landing  <b>LNTL:</b> Lintel  <b>LOC:</b> Locate  <b>LOCS:</b> Locations  <b>LVR:</b> Louver  <b>LW:</b> Light Weight  <b>LWC:</b> Light Weight Concrete    <b>M:</b> Bending Moment  <b>MAINT:</b> Maintenance  <b>MAN:</b> Manual  <b>MAS:</b> Masonry  <b>MAT:</b> Material  <b>MATL:</b> Material  <b>MAX:</b> Maximum  <b>ME:</b> Mechanical Engineer  <b>MECH:</b> Mechanical  <b>MEMB:</b> Membrane  <b>MET:</b> Metal  <b>MEZZ:</b> Mezzanine  <b>MFD:</b> Manufactured, Metal Floor Deck  <b>MFG:</b> Manufacturer, Manufacturing  <b>MFR:</b> Manufacture, Manufacturer  <b>MH:</b> Manhole  <b>MIN:</b> Minimum  <b>MISC:</b> Miscellaneous  <b>MM:</b> Millimeter  <b>MMB:</b> Membrane  <b>MO:</b> Masonry Opening  <b>MOD:</b> Module  <b>MONO:</b> Monolithic  <b>MOV:</b> Movable  <b>MRD:</b> Metal Roof Deck  <b>MT:</b> Mount, Mounted  <b>MTD:</b> Mounted  <b>MTL:</b> Metal    <b>N:</b> North  <b>NF:</b> Near Face  <b>NI:</b> Nickel  <b>NS:</b> Near Side  <b>NTS:</b> Not To Scale    <b>O TO O:</b> Out to Out  <b>OBS:</b> Obscure  <b>OC:</b> On Center  <b>OD:</b> Outside Diameter  <b>OF:</b> Outside Face  <b>OH:</b> Overhead  <b>OHD:</b> Overhead Door  <b>OPNG:</b> Opening  <b>OPP:</b> Opposite  <b>OVFL:</b> Overflow  <b>OW:</b> Open Waste    <b>P SL:</b> Pipe Sleeve  <b>PAF:</b> Powder Actuated Fasteners  <b>PAR:</b> Parallel  <b>PC:</b> Precast Concrete  <b>PCF:</b> Pounds per cubic foot  <b>PCPL:</b> Portland Cement Plaster  <b>PE:</b> Professional Engineer  <b>PED:</b> Pedestal  <b>PERIM:</b> Perimeter  <b>PERP:</b> Perpendicular  <b>PFN:</b> Prefinished  <b>PJF:</b> Preformed Joint Filler  <b>PKG:</b> Parking  <b>PKWY:</b> Parkway  <b>PL:</b> Plate, Plan, Property Line  <b>PLBG:</b> Plumbing  <b>PLF:</b> Pounds Per Lineal Foot  <b>PLTF:</b> Platform  <b>PLWD:</b> Plywood  <b>PNT:</b> Paint  <b>PRC:</b> Precast  <b>PRE:</b> Prefinished  <b>PREFAB:</b> Prefabricated    <b>PRE:</b> Pressure  <b>PRF:</b> Preformed  <b>PR1:</b> Primary  <b>PSC:</b> Prestressed Concrete  <b>PSF:</b> Pounds per square foot  <b>PSI:</b> Pounds per square Inch  <b>PT:</b> Pressure Treated  <b>PTC:</b> Post-Tensioned Concrete  <b>PVG:</b> Paving  <b>PVMT:</b> Pavement  <b>PVT:</b> Private    <b>QUAL:</b> Quality  <b>QTR:</b> Quarter  <b>QTY:</b> Quantity    <b>RAD:</b> Radius  <b>RCP:</b> Reinforced Concrete Pipe  <b>RD:</b> Roof Drain, Round  <b>REBAR:</b> Reinforcing Bar  <b>REFL:</b> Reflected, Reflector  <b>REINF:</b> Reinforcement, or Reinforce  <b>REM:</b> Remove, Removable  <b>REOD:</b> Required  <b>RET:</b> Retaining  <b>REV:</b> Revise, Revision  <b>RF:</b> Roof  <b>RFG:</b> Roofing  <b>RGH:</b> Rough  <b>RGH OPNG:</b> Rough Opening  <b>SSCFT:</b> Structural Clay Facing Tile  <b>SCHED:</b> Schedule  <b>SE:</b> Structural Engineer  <b>SEAL:</b> Sealant  <b>SECT:</b> Section  <b>SHTH:</b> Sheathing  <b>SHTHG:</b> Sheathing  <b>SIM:</b> Similar  <b>SJS:</b> Silicone Joint Sealant  <b>SLOT:</b> Slotted  <b>SLV:</b> Sleeve  <b>SPECS:</b> Specifications  <b>SO:</b> Square  <b>SS:</b> Stainless Steel    <b>SSD:</b> Sub-soil Drain  <b>SSGS:</b> Silicone Structural Glazing Sealant  <b>ST:</b> Straight  <b>STA:</b> Station  <b>STD:</b> Standard  <b>STIFF:</b> Stiffener  <b>STL:</b> Steel  <b>STR:</b> Structural  <b>SUR:</b> Surface  <b>SUSP:</b> Suspended, Suspend    <b>T/:</b> Top  <b>TC:</b> Top of Curb  <b>TD:</b> Trench Drain  <b>THK:</b> Thick, Thickness  <b>THRU:</b> Through  <b>TP:</b> Top of Pavement  <b>T.O. SLAB:</b> Top of Slab  <b>T.O.S.:</b> Top of Steel    <b>UNEXC:</b> Unexcavated  <b>UNFIN:</b> Unfinished  <b>UNO:</b> Unless Noted Otherwise  <b>USS:</b> United States Standard  <b>UT:</b> Utility    <b>VB:</b> Vapor Barrier  <b>VBC:</b> Vinyl Base (Coved)  <b>VERT:</b> Vertical  <b>VEST:</b> Vestibule  <b>VF:</b> Vinyl Fabric    <b>VIF:</b> Verify in the Field  <b>VNR:</b> Veneer  <b>VP:</b> Vent Pipe    <b>W/:</b> With  <b>W/O:</b> Without  <b>WM:</b> Wire Mesh  <b>WP:</b> Working Point    <b>WPR:</b> Waterproofing  <b>WT:</b> Weight  <b>WWF:</b> Welded Wire Fabric    <b>XH:</b> Extra Heavy  <b>XS:</b> Extra Strong  <b>XXS:</b> Double Extra Strong </p>
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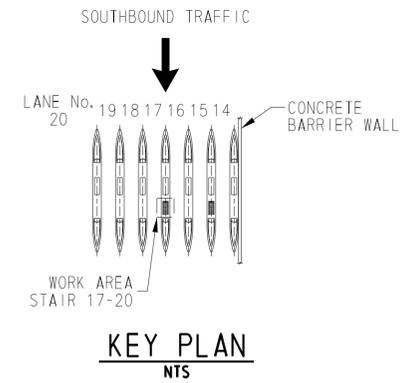


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 FILE LOCATION: Q:\INDE\120995\_01\1-95\_TOLL\_PLAZA\_STAYCADD\LG.DGN [ SHEET: LG ]

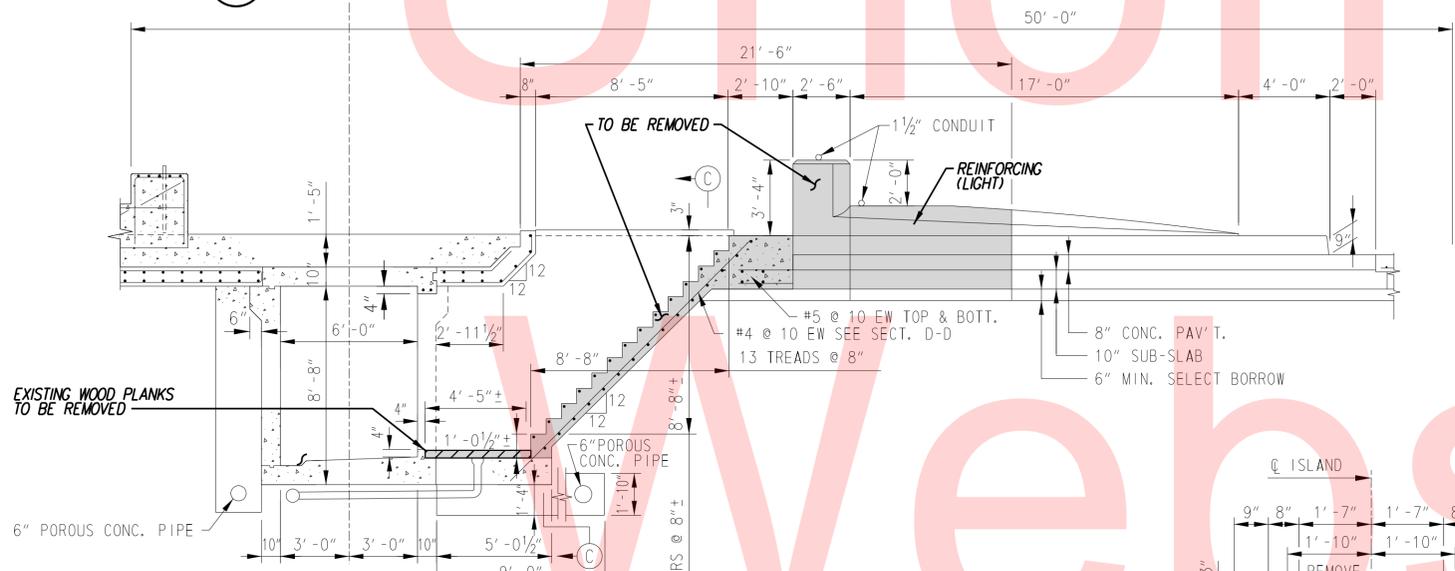




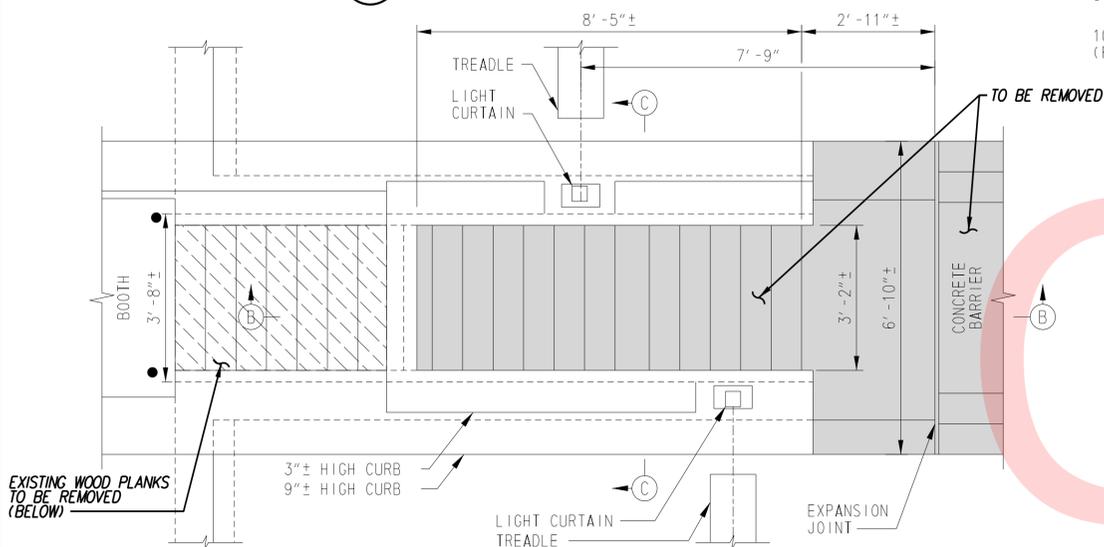
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SCALE: 1/4"=1'-0"



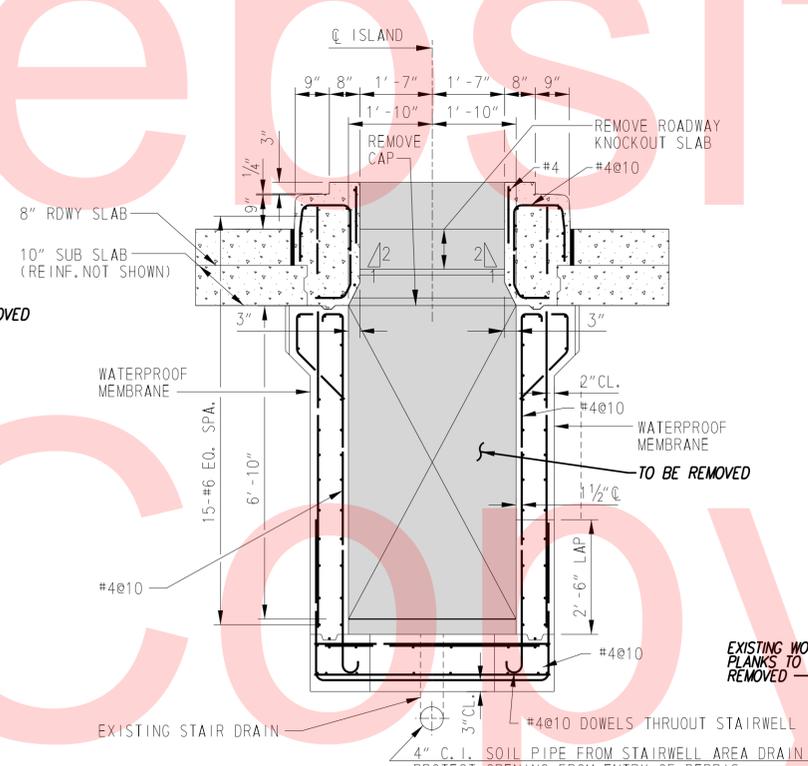
KEY PLAN  
NTS



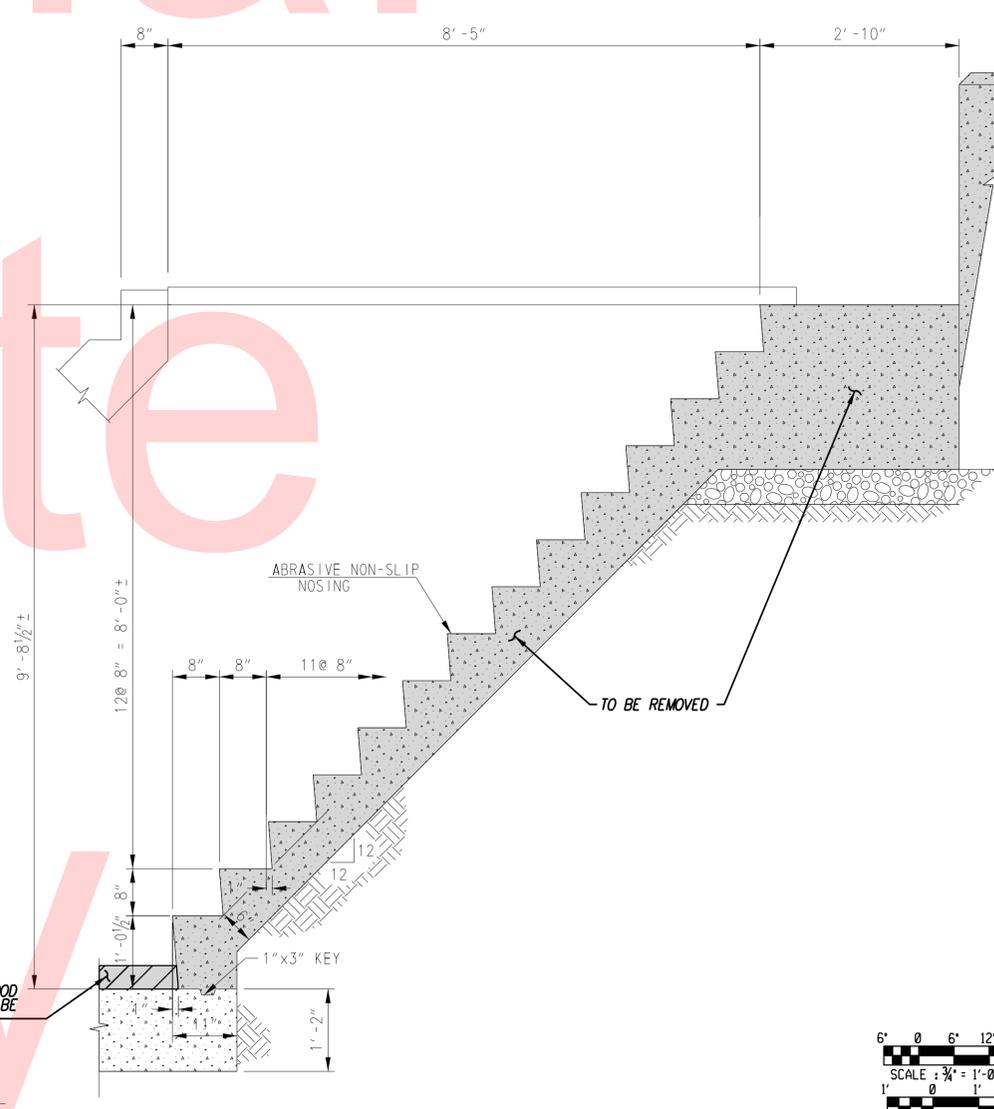
2 EXISTING SECTION A-A  
SCALE: 1/4"=1'-0"



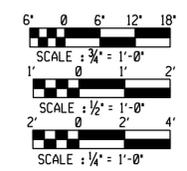
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SCALE: 1/2"=1'-0"



4 SECTION C-C  
SCALE: 1/2"=1'-0"



5 EXISTING STEP SECTION B-B  
SCALE: 3/4"=1'-0"



PLOTTED BY: MONTE DATE: 5/9/2016  
 FILE LOCATION: Q:\INDE\120995\_01\I-95\_TOLL\_PLAZA\_STAYCADD.DWG [ SHEET: DP01 ]

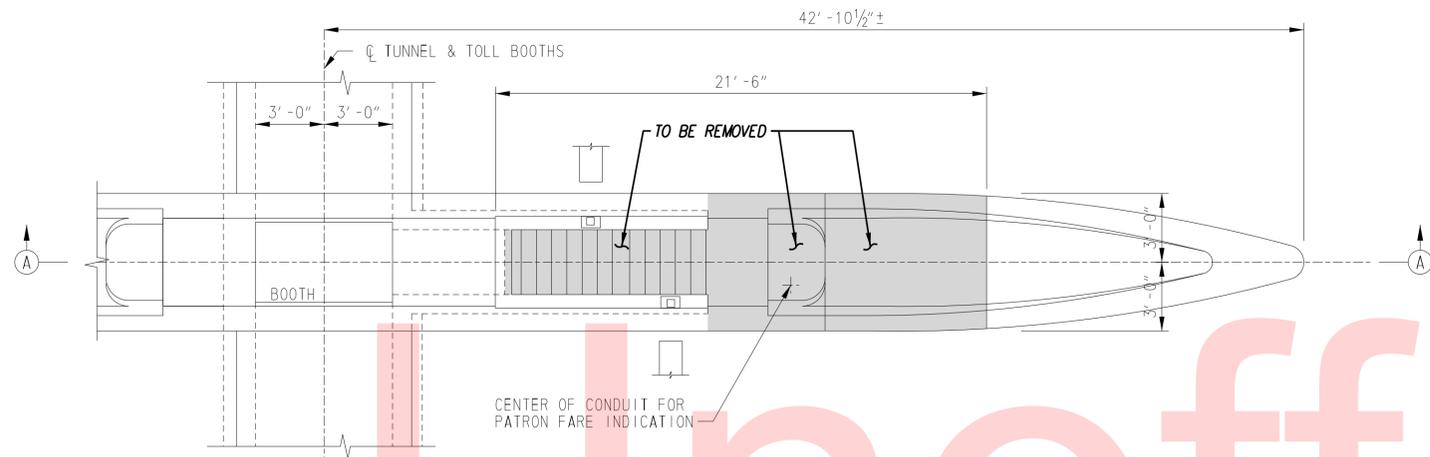
ADDENDUMS / REVISIONS	

AS NOTED

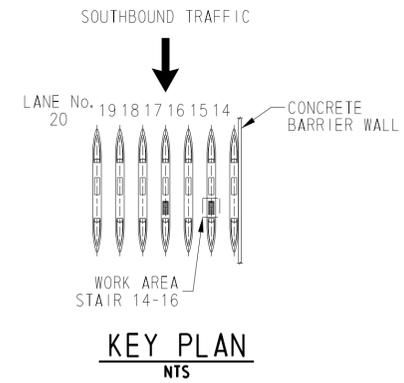
**NEWARK TOLL PLAZA  
195 TUNNEL STAIRS REPLACEMENT**

CONTRACT	BRIDGE NO.
COUNTY	DESIGNED BY: NLL
NEW CASTLE	CHECKED BY: JHB

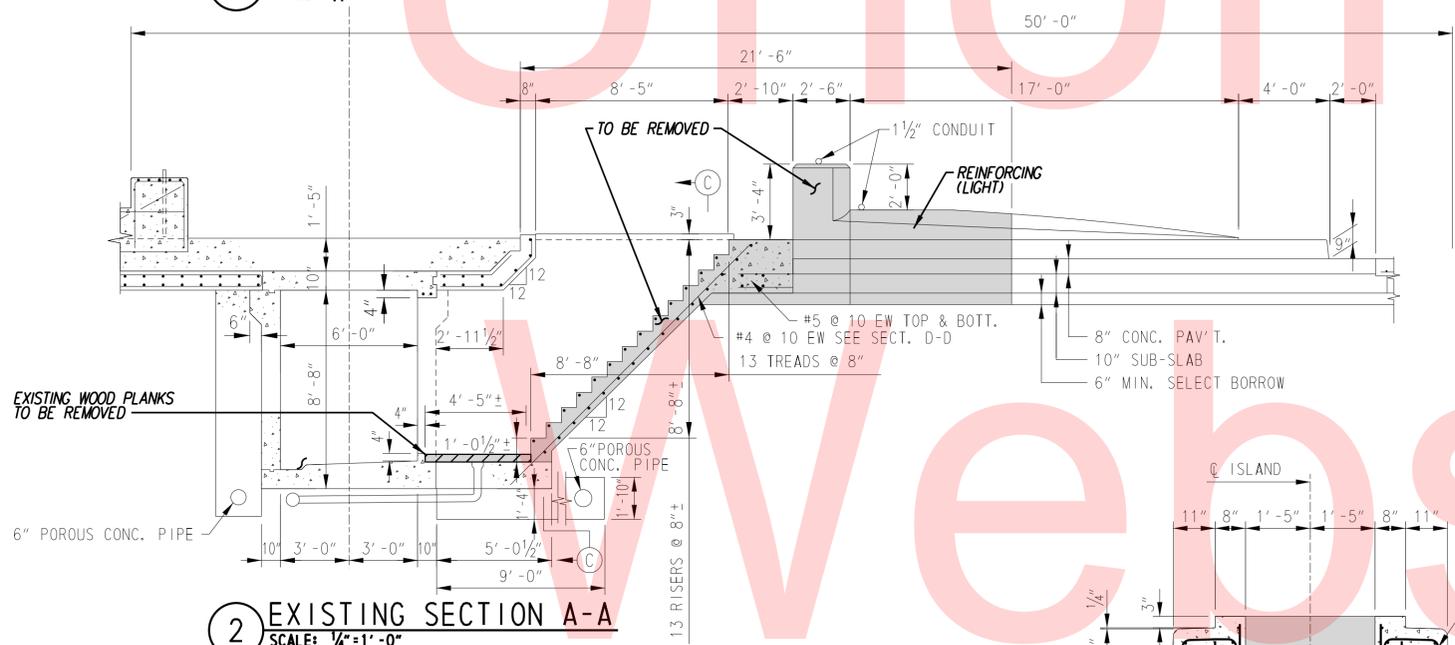
**DEMOLITION PLANS,  
SECTIONS, AND DETAILS  
STAIR 17-20**



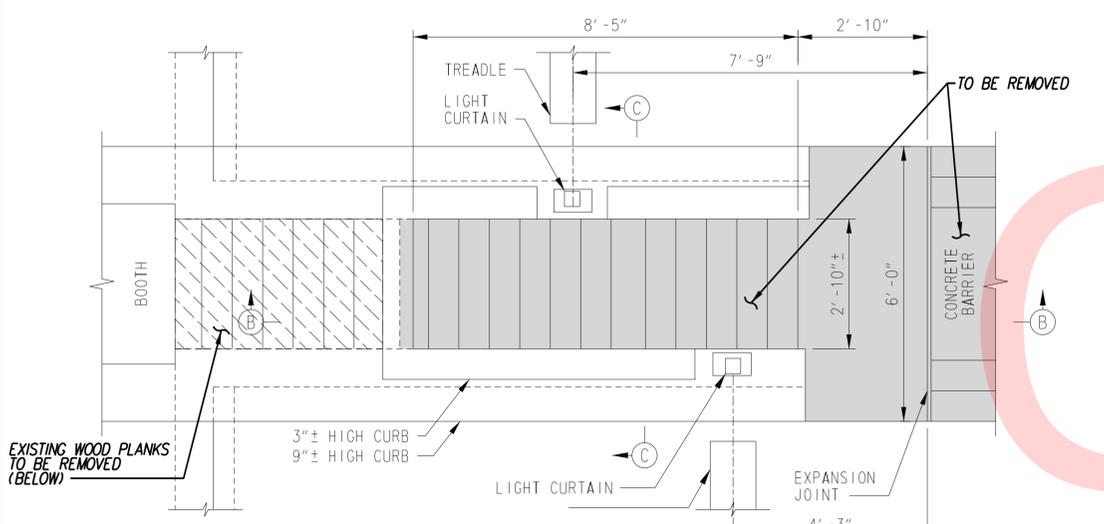
1 EXISTING PLAN VIEW OF ISLAND WITH STAIRWAY 14-16  
SCALE: 1/4"=1'-0"



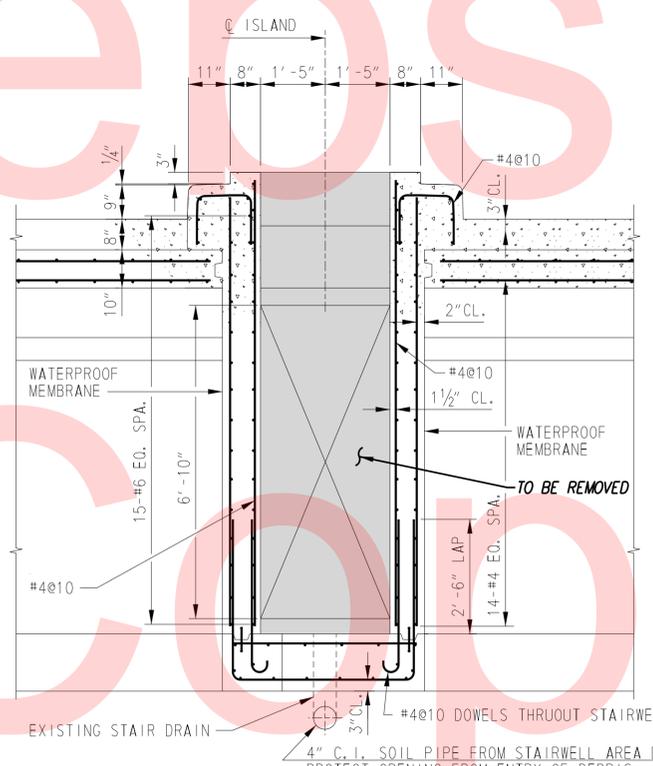
KEY PLAN  
NTS



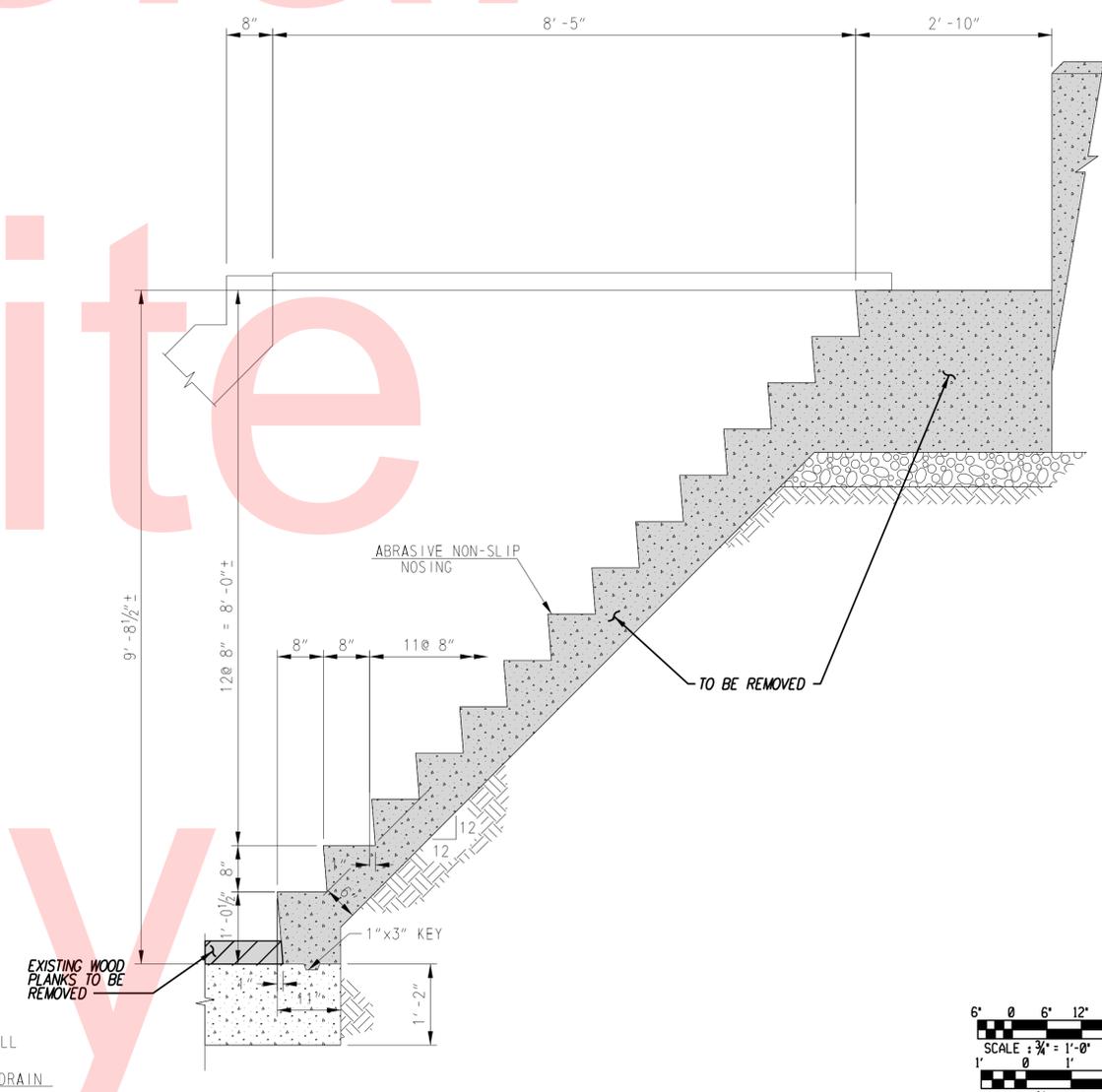
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SCALE: 1/4"=1'-0"



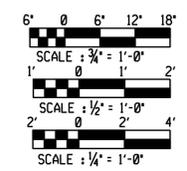
3 EXISTING STAIR PLAN 14-16  
SCALE: 1/2"=1'-0"



4 SECTION C-C  
SCALE: 1/2"=1'-0"



5 EXISTING STEP SECTION B-B  
SCALE: 3/4"=1'-0"



PLOTTED BY: MONTE DATE: 5/9/2016  
 FILE LOCATION: Q:\INDE\120995\_01\L-95\_TOLL\_PLAZA\_STAIRCADD.DP.DGN [ SHEET: DP02 ]

ADDENDUMS / REVISIONS	

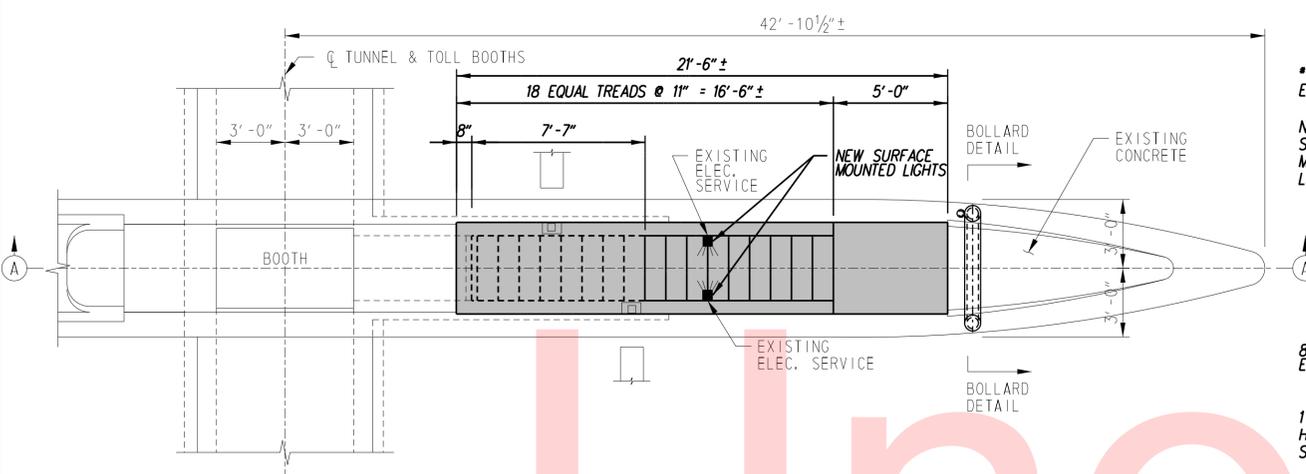
AS NOTED

**NEWARK TOLL PLAZA**  
**195 TUNNEL STAIRS REPLACEMENT**

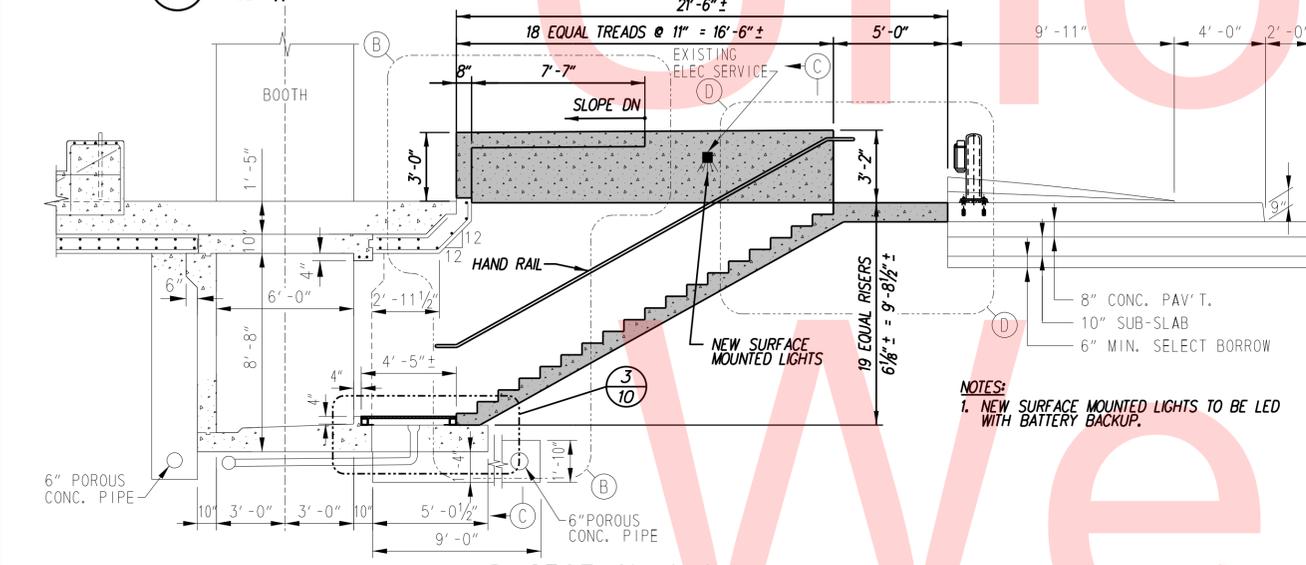
CONTRACT	BRIDGE NO.
COUNTY	DESIGNED BY: NLL
NEW CASTLE	CHECKED BY: JHB

**DEMOLITION PLANS,**  
**SECTIONS, AND DETAILS**  
**STAIR 14-16**

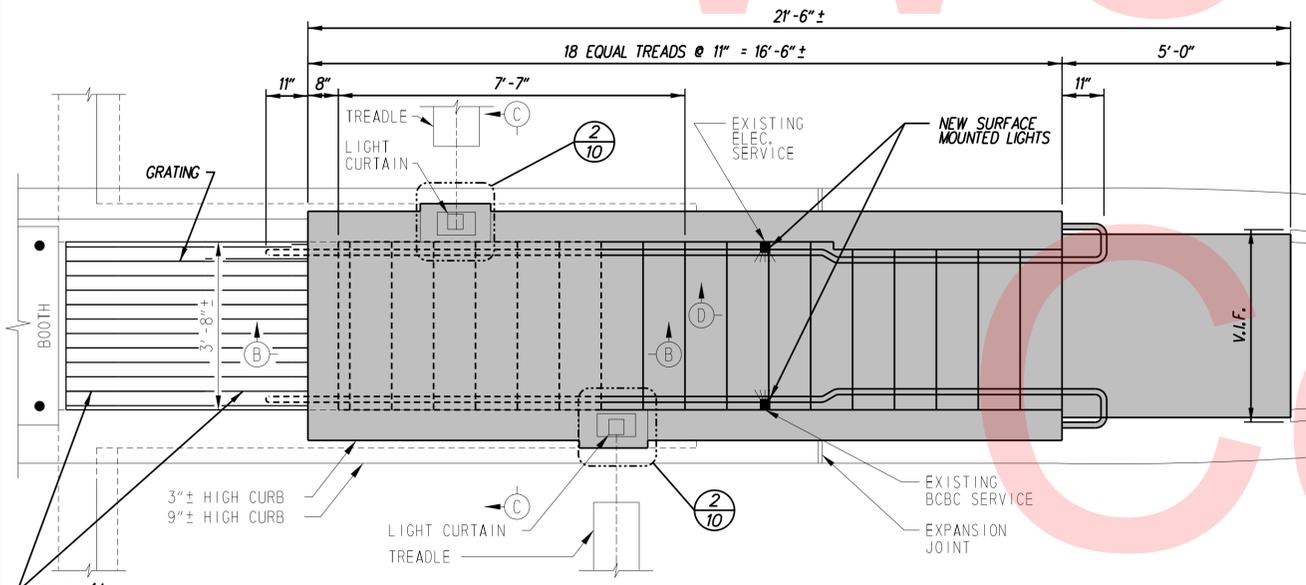
SHEET NO.	5
TOTAL SHTS.	11



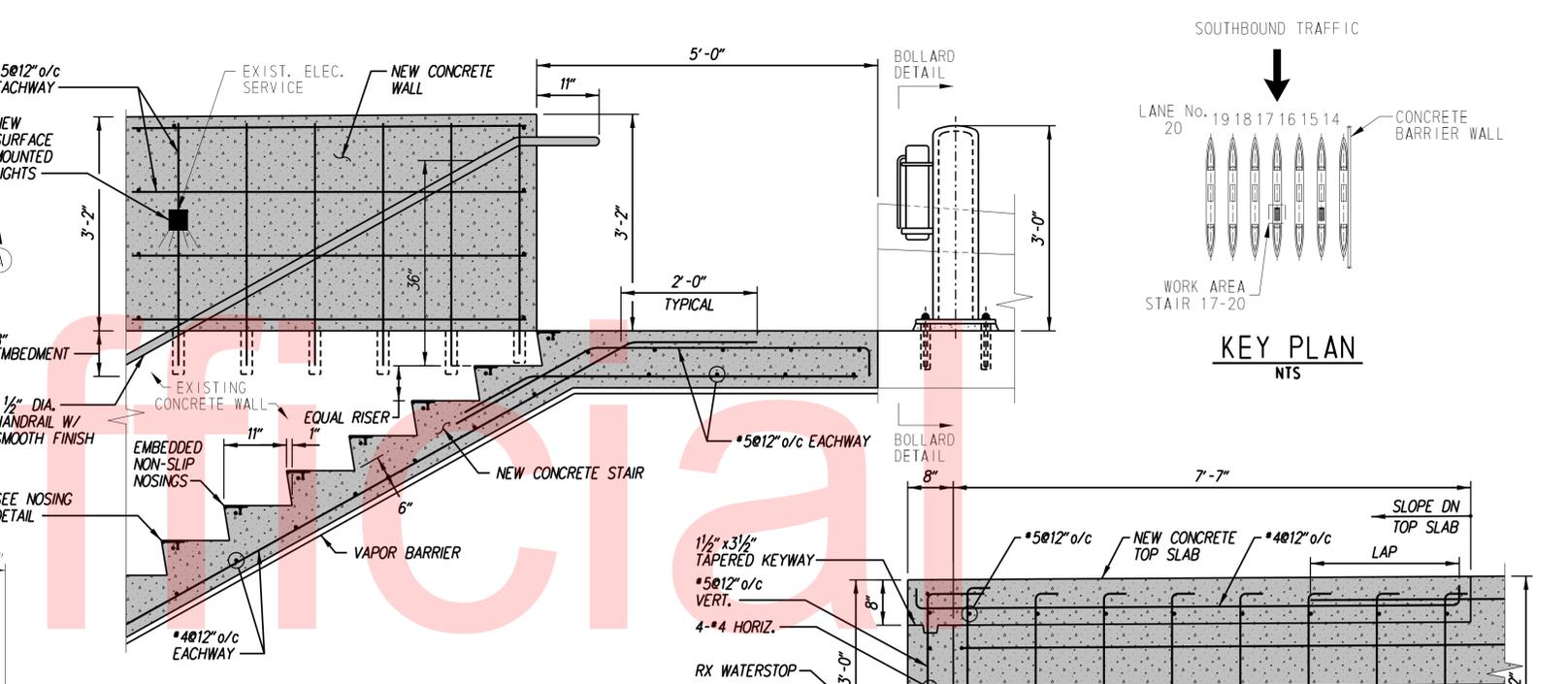
1 TYPICAL PLAN VIEW OF ISLAND WITH STAIRWAY 17-20  
SCALE: 1/4" = 1'-0"



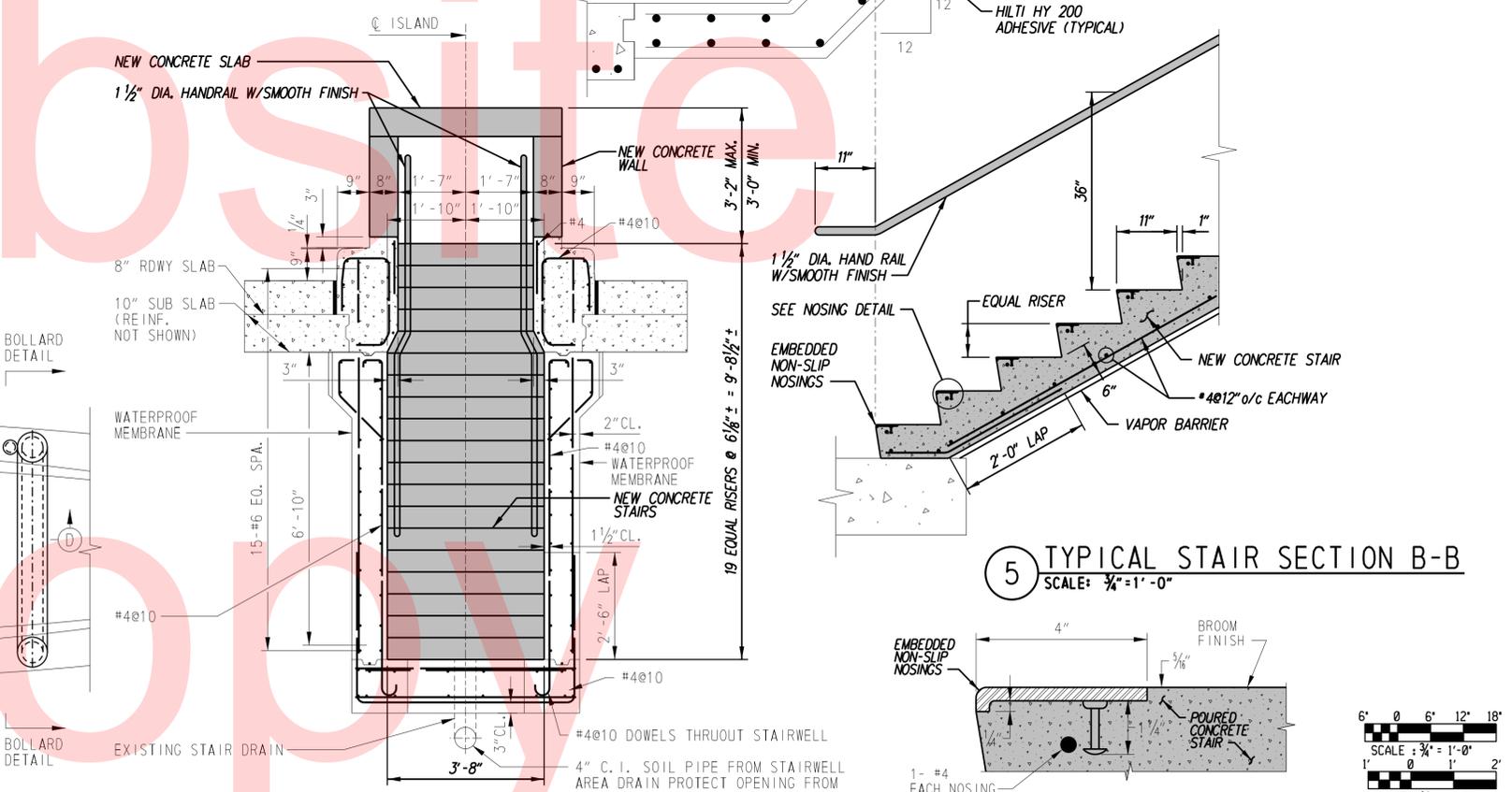
2 SECTION A-A  
SCALE: 1/4" = 1'-0"



3 STAIR PLAN 17-20  
SCALE: 1/2" = 1'-0"



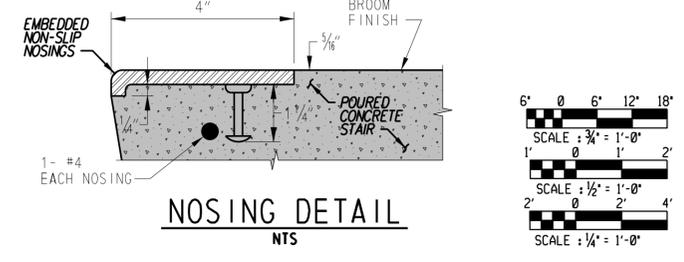
6 TYPICAL STAIR SECTION D-D  
SCALE: 3/4" = 1'-0"



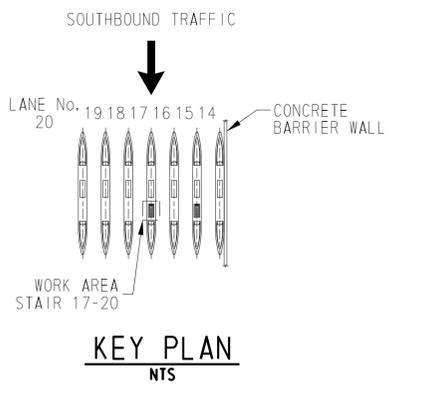
5 TYPICAL STAIR SECTION B-B  
SCALE: 3/4" = 1'-0"



4 SECTION C-C  
SCALE: 1/2" = 1'-0"



NOSING DETAIL  
NTS



KEY PLAN  
NTS

PLOTTED BY: MONTE DATE: 5/9/2016  
 FILE LOCATION: Q:\INDE\120995\_01\1-95\_TOLL\_PLAZA\_STAYCADD\CP.DGN [ SHEET: NCP01 ]

	ADDENDUMS / REVISIONS		AS NOTED	NEWARK TOLL PLAZA 195 TUNNEL STAIRS REPLACEMENT		CONTRACT	BRIDGE NO.	NEW CONSTRUCTION PLANS, SECTIONS, AND DETAILS STAIR 17-20	SHEET NO.	
					COUNTY	DESIGNED BY: NLL			TOTAL SHTS.	
					NEW CASTLE	CHECKED BY: JHB			11	



# GENERAL STRUCTURAL REPAIR NOTES

## REPAIR 1 - STRUCTURAL CONCRETE WALLS AND SLABS WITH A DEPTH OF SPALLING GREATER THAN 1/2-INCH DEEP:

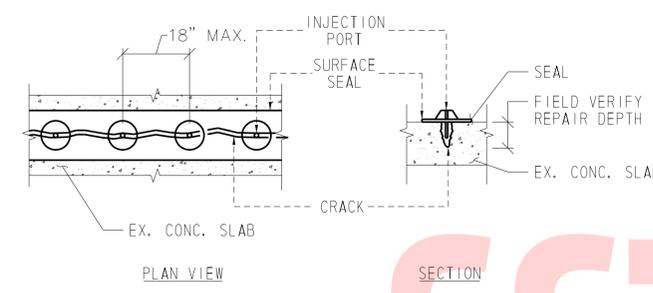
- REMOVE ALL CONTAMINATED, DETERIORATED OR UNSOUND CONCRETE IN ACCORDANCE WITH REPAIR MATERIAL MANUFACTURER'S RECOMMENDATIONS AND IN A MANNER THAT ALLOWS PLACEMENT OF REPAIR MATERIAL TO THE THICKNESS, LINES, AND LEVELS INDICATED. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE OR CUT EXISTING REINFORCEMENT DURING CONCRETE REMOVAL. WHEN REINFORCING BARS ARE WELL BONDED TO SURROUNDING CONCRETE AND/OR TO SOUND CONCRETE, CARE SHALL ALSO BE TAKEN SO AS NOT TO DAMAGE REINFORCING BARS TO REMAIN BONDED TO SURROUNDING CONCRETE. IF BOND BETWEEN REINFORCING BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR IS REQUIRED.
- AT EDGE LOCATIONS SAW CUT (1/2 INCH OR LESS) EDGES TO PREVENT FEATHERED EDGE CONDITIONS. DO NOT DAMAGE OR CUT EXISTING REINFORCING STEEL TO REMAIN.
- CLEAN CONCRETE SURFACE OF ALL OIL, GREASE, CONTAMINATES DIRT, DEBRIS, OR FOREIGN MATTER BY HIGH PRESSURE, HYDRO-DEMOLITION PROCESS OR OTHER MECHANICAL MEANS, TO SOUND CONCRETE SURFACE TO A 1/2-INCH DEEP PROFILE.
- REMOVE LOOSE AND HEAVY RUST ON REINFORCING BY SANDBLASTING OR POWER TOOL CLEANING REINFORCING BARS. WHERE UNDERCUTTING IS REQUIRED, REMOVE CONCRETE AROUND STEEL REINFORCING TO A DISTANCE OF 3/4 INCH - 1 INCH AROUND EACH BAR. WHERE MORE THAN 25% OF THE REINFORCING CROSS SECTION IS REMOVED, LAP A REINFORCING BAR OF THE SAME SIZE A MINIMUM OF 24 INCHES BEYOND THE LOCATION WHERE MORE THAN 25% OF THE CROSS SECTION IS PRESENT.
- AFTER CLEANING CONCRETE SURFACES, REMOVE ALL DUST PARTICLES AND LOOSE MATERIAL OR RESIDUE FROM CONCRETE AND REBAR SURFACES BY PRESSURE WASHING OR HIGH-PRESSURE AIR CHECK CONCRETE SURFACES TO INSURE THAT SURFACE IS FREE FROM ADDITIONAL LOOSE AGGREGATE, OR THAT ADDITIONAL DELAMINATIONS ARE NOT PRESENT. NEW CONCRETE REPAIR SHALL EXTEND A MINIMUM OF 3 INCHES BEYOND SOUND EXISTING CONCRETE.
- WHEN HIGH PRESSURE HYDRO-DEMOLITION IS USED AS A MEANS FOR CONCRETE REMOVAL OR CLEANING OF FOREIGN MATTER AND RESIDUE, CEMENT AND PARTICULATE SLURRY RESIDUAL MATERIAL CREATED BY HYDRO-DEMOLITION MUST BE REMOVED FROM PREPARED SURFACES BEFORE SLURRY HARDENS.
- BRUSH ON CORROSION-INHIBITING PRIMER ON REINFORCING BAR AND APPLY A BONDING AGENT TO CONCRETE SURFACES. FOLLOW MANUFACTURERS GUIDELINES FOR APPLICATION OF PRIMER AND BONDING AGENT. REFER TO SPECIFICATIONS FOR APPROVED MATERIAL.
- EXISTING CONCRETE SURFACES SHALL BE INTENTIONALLY ROUGHENED TO ± 1/8 INCH SURFACE PROFILE AND/OR PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLING THE REPAIR MATERIAL. PRIOR TO INSTALLING REPAIR MATERIAL, PRESOAK EXISTING CONCRETE SURFACES TO SATURATED SURFACE-DRY (SSD) CONDITION.
- AREA TO BE PATCHED TO MATCH EXISTING PROFILES. FILL AREA FLUSH WITH STRUCTURAL REPAIR MATERIAL. REFER TO SPECIFICATION FOR APPROVED MATERIALS.
- ALL HYDRO DEMOLITION BLASTING FLUIDS AND/OR SAND BLASTING FLUIDS SHALL BE CONTAINED, COLLECTED, AND PROPERLY DISPOSED OF. REFERENCE SPECIFICATION SECTIONS: "TEMPORARY FACILITIES AND CONTROLS," "CONSTRUCTION WASTE MANAGEMENT" AND "SELECTIVE DEMOLITION."

## REPAIR 2 - CONCRETE SPALLING REPAIR OF 1/2 INCH OR LESS WITH A DEPTH OF SPALLING 1/2 INCH OR LESS:

- REMOVE ALL DETERIORATED OR UNSOUND CONCRETE AND CLEAN SURFACES AS DESCRIBED IN STRUCTURAL REPAIR PARAGRAPHS ABOVE.
- APPLY BONDING AGENT TO CONCRETE SURFACES AND PATCH CONCRETE. REFER TO SPECIFICATIONS FOR APPROVED MATERIAL.
- REFER TO CONCRETE REPAIR DETAILS AND "REPAIR 1" NOTES ON THIS SHEET.

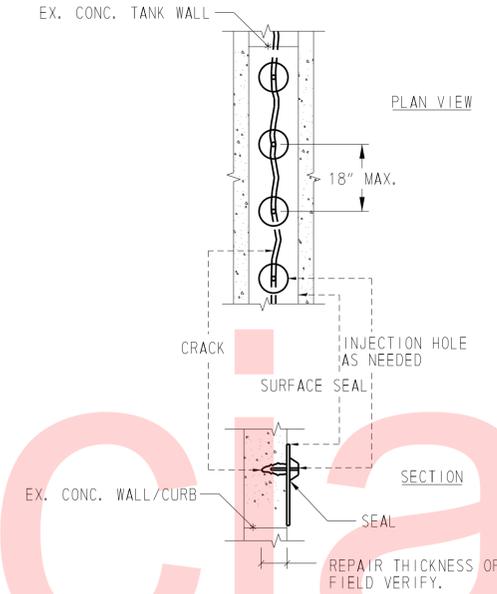
## REPAIR 3 - REPAIR OF CRACKS GREATER THAN HAIRLINE WIDTH TO A MAXIMUM THICKNESS OF 1/4 INCH:

- CLEAN CRACK SURFACES AND REMOVED ANY FOREIGN MATTER AND DEPOSITS.
- INSTALL ENTRY PORTS AND SEALANT ALONG LENGTH OF CRACK.
- APPLY SURFACE SEAL COMPOUND TO FACE OF CRACK FOR ENTIRE LENGTH OF CRACK.
- INJECT REPAIR COMPOUND INTO CRACK UNDER PRESSURE THROUGH ENTRY PORTS.
- REMOVE SURFACE SEAL AND PORTS AND CLEAN SURFACE AFTER INJECTION COMPOUND HAS CURED.
- REFER TO INJECTION REPAIR DETAIL ON THIS SHEET.
- REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC REPAIR GUIDELINES.



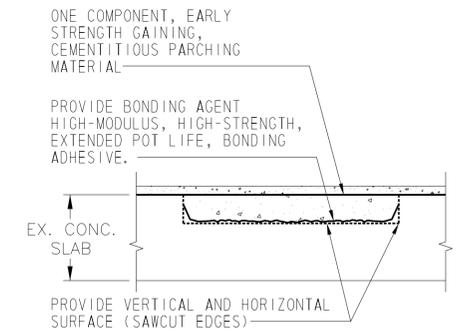
**1** CONCRETE SLAB CRACK REPAIR DETAIL  
SCALE: NOT TO SCALE

- NOTES:
- PREPARE CRACK IN ACCORDANCE WITH SEALANT MANUFACTURER'S INSTRUCTIONS.
  - PROVIDE HIGH-MODULUS, HIGH-STRENGTH, STRUCTURAL, VERY RAPID CURING, SMOOTH, PASTE ADHESIVE TO SURFACE SEAL CRACKS AND TO SECURE INJECTION PORTS IN CONCRETE PRIOR TO PRESSURE INJECTION.
  - PROVIDE HIGH-MODULUS, LOW-VISCOSITY, HIGH-STRENGTH, EXTENDED POT LIFE, ADHESIVE FOR PRESSURE INJECTION OF CRACKS.
  - REFER TO STRUCTURAL REPAIR NOTES FOR GUIDELINES AND REQUIREMENTS.
  - REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC GUIDELINES.



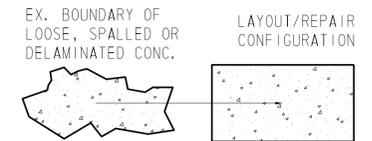
**1A** CONCRETE VERTICAL CRACK REPAIR DETAIL  
SCALE: NOT TO SCALE

- NOTES:
- PREPARE CRACK IN ACCORDANCE WITH SEALANT MANUFACTURER'S INSTRUCTIONS.
  - PROVIDE HIGH-MODULUS, HIGH-STRENGTH, STRUCTURAL, VERY RAPID CURING, SMOOTH, PASTE ADHESIVE TO SURFACE SEAL CRACKS AND TO SECURE INJECTION PORTS IN CONCRETE PRIOR TO PRESSURE INJECTION.
  - PROVIDE HIGH-MODULUS, LOW-VISCOSITY, HIGH-STRENGTH, EXTENDED POT LIFE, ADHESIVE FOR PRESSURE INJECTION OF CRACKS.
  - REFER TO STRUCTURAL REPAIR NOTES FOR GUIDELINES AND REQUIREMENTS.
  - REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC GUIDELINES.



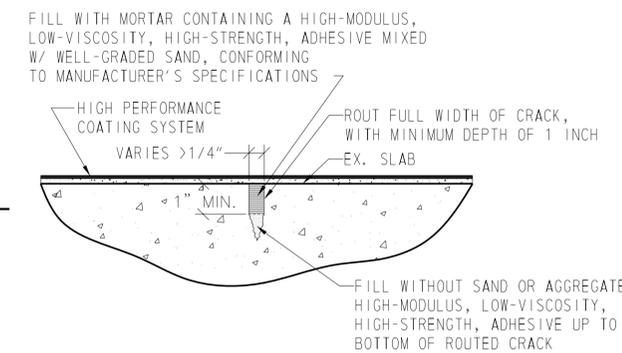
**2** CONCRETE SURFACE SPALLING REPAIR DETAIL  
SCALE: NOT TO SCALE

- NOTES:
- PREPARE SPALLED AREA FOR REPAIR IN ACCORDANCE WITH REPAIR MORTAR MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE BONDING AGENT HIGH-MODULUS, HIGH-STRENGTH, EXTENDED POT LIFE, BONDING ADHESIVE.
  - IF JOINT IS REQUIRED, PROVIDE TWO-COMPONENT, NON-SAG POLYURETHANE ELASTOMERIC SEALANT.
  - DETAIL APPLIES TO SURFACE DAMAGE UP TO 2 INCHES MAX. IN DEPTH. REFER TO CONCRETE SURFACE REPAIR DETAIL 1/S-302 FOR GENERAL CONFIGURATION PLAN.
  - REFER TO GENERAL STRUCTURAL CONCRETE REPAIR NOTES FOR GUIDELINES AND REQUIREMENTS.
  - REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC GUIDELINES.
  - EXTEND REPAIR MATERIAL AS REQUIRED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



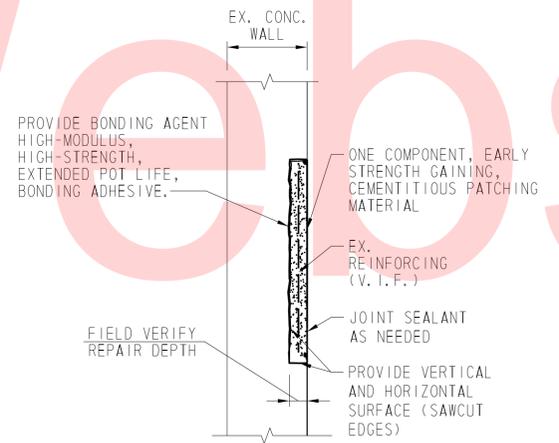
**3** GENERAL CONFIGURATION FOR REPAIR OF DAMAGED CONCRETE SURFACE  
SCALE: NOT TO SCALE

- NOTES:
- REPAIR CONFIGURATIONS TO BE KEPT AS SIMPLE AS POSSIBLE.
  - CORNERS SHALL BE SQUARED TO AVOID FEATHERED EDGES.
  - PREPARE AREA IN ACCORDANCE WITH REPAIR PRODUCT MANUFACTURER'S RECOMMENDATIONS.
  - REFER TO SPECIFICATIONS FOR SPECIFIC GUIDELINES.



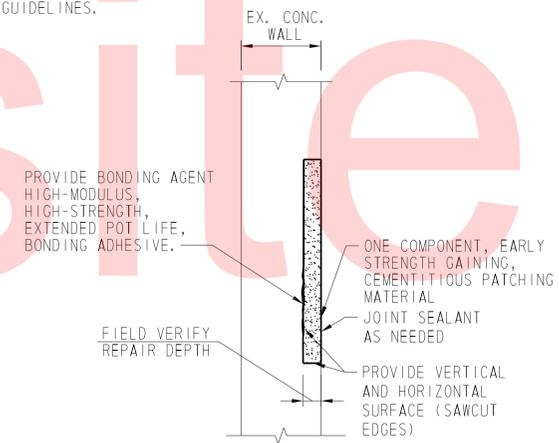
**4** CONCRETE CRACK GREATER THAN 1/4 INCH WIDE  
SCALE: NOT TO SCALE

- NOTES:
- TOOL JOINT TO CONCAVE SURFACE.
  - BEFORE ROUTING, REMOVE, EXISTING JOINT MATERIAL. AFTERWARDS, CRACK SHALL BE PREPARED BY WATER BLASTING BEFORE ANY ADHESIVE IS PLACED.
  - BEFORE PLACEMENT OF MORTAR, PRIME ROUTED SURFACE WITH NEAT ADHESIVE. PLACE MORTAR BEFORE PRIMER BECOMES TACK-FREE.
  - REFER TO SPECIFICATIONS FOR APPROVED MATERIAL AND MANUFACTURER'S PRODUCTS AND SPECIFIC GUIDELINES.



**2A** VERTICAL CONCRETE SURFACE REPAIR W/ REINFORCEMENT DETAIL  
SCALE: NOT TO SCALE

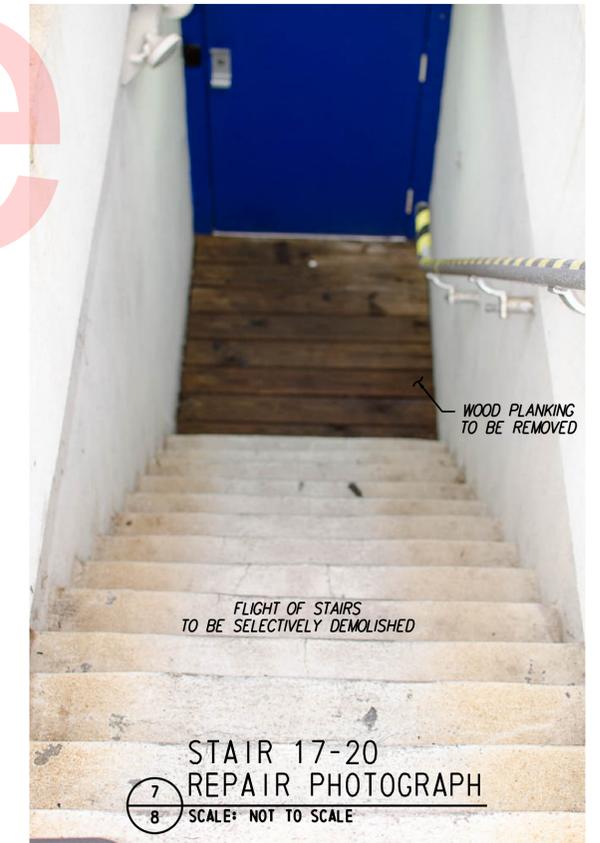
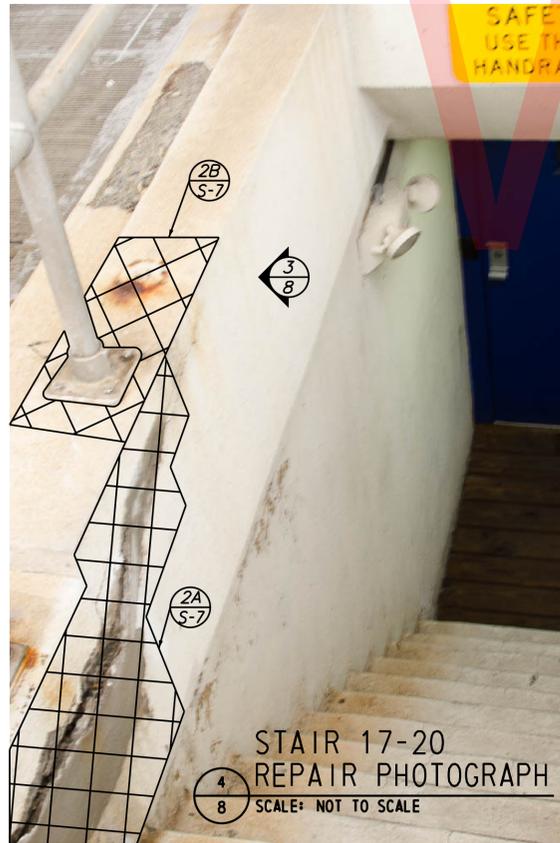
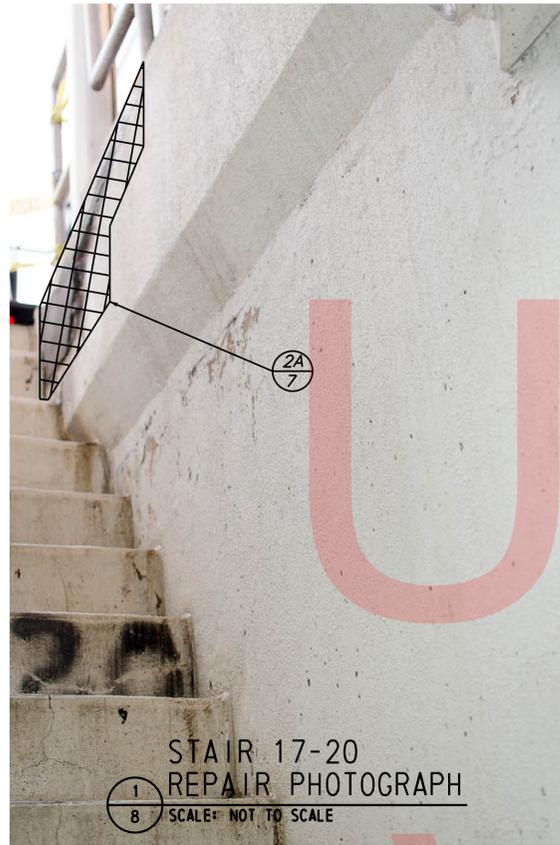
- NOTES:
- PREPARE SPALLED AREA FOR REPAIR IN ACCORDANCE WITH REPAIR MORTAR MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE BONDING AGENT HIGH-MODULUS, HIGH-STRENGTH, EXTENDED POT LIFE, BONDING ADHESIVE.
  - IF JOINT IS REQUIRED, PROVIDE TWO-COMPONENT, NON-SAG POLYURETHANE ELASTOMERIC SEALANT.
  - DETAIL APPLIES TO SURFACE DAMAGE UP TO 2 INCHES MAX. IN DEPTH. REFER TO CONCRETE SURFACE REPAIR DETAIL 1/S-302 FOR GENERAL CONFIGURATION PLAN.
  - REFER TO GENERAL STRUCTURAL CONCRETE REPAIR NOTES FOR GUIDELINES AND REQUIREMENTS.
  - REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC GUIDELINES.
  - EXTEND REPAIR MATERIAL AS REQUIRED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



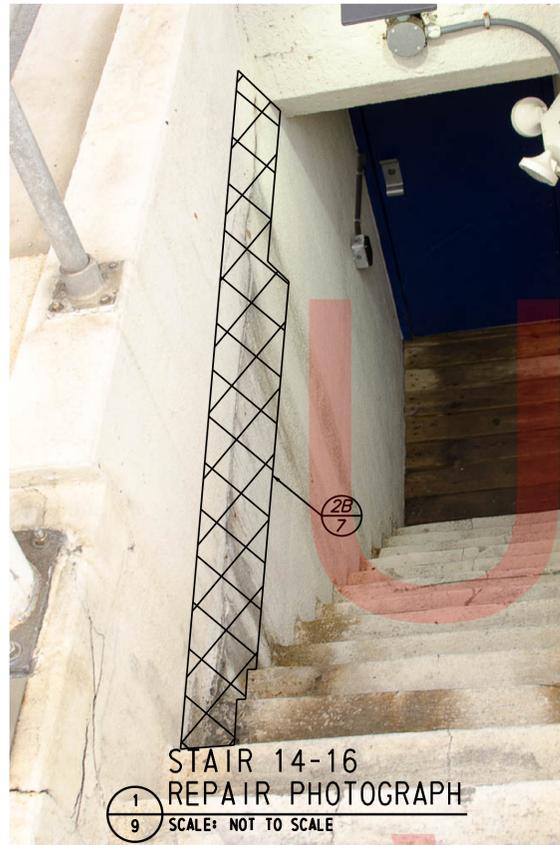
**2B** VERTICAL CONCRETE SURFACE REPAIR W/O REINFORCEMENT DETAIL  
SCALE: NOT TO SCALE

- NOTES:
- PREPARE SPALLED AREA FOR REPAIR IN ACCORDANCE WITH REPAIR MORTAR MANUFACTURER'S RECOMMENDATIONS.
  - PROVIDE BONDING AGENT HIGH-MODULUS, HIGH-STRENGTH, EXTENDED POT LIFE, BONDING ADHESIVE.
  - IF JOINT IS REQUIRED, PROVIDE TWO-COMPONENT, NON-SAG POLYURETHANE ELASTOMERIC SEALANT.
  - DETAIL APPLIES TO SURFACE DAMAGE UP TO 2 INCHES MAX. IN DEPTH. REFER TO CONCRETE SURFACE REPAIR DETAIL 1/S-302 FOR GENERAL CONFIGURATION PLAN.
  - REFER TO GENERAL STRUCTURAL CONCRETE REPAIR NOTES FOR GUIDELINES AND REQUIREMENTS.
  - REFER TO SPECIFICATIONS FOR MATERIAL REQUIREMENTS AND SPECIFIC GUIDELINES.
  - EXTEND REPAIR MATERIAL AS REQUIRED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

PLOTTED BY: MONTES DATE: 5/9/2016 FILE LOCATION: Q:\INDE\120995\_01\1-95\_TOLL\_PLAZA\_STA\CAADD\DT01.DGN [ SHEET: DT01 ]



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 FILE LOCATION: Q:\INDE\120995\_01\L1-95\_TOLL\_PLAZA\_STAYCADD\DT.DGN [ SHEET: PH03 ]



PLOTTED BY: MONTES DATE: 5/9/2016  
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ADDENDUMS / REVISIONS

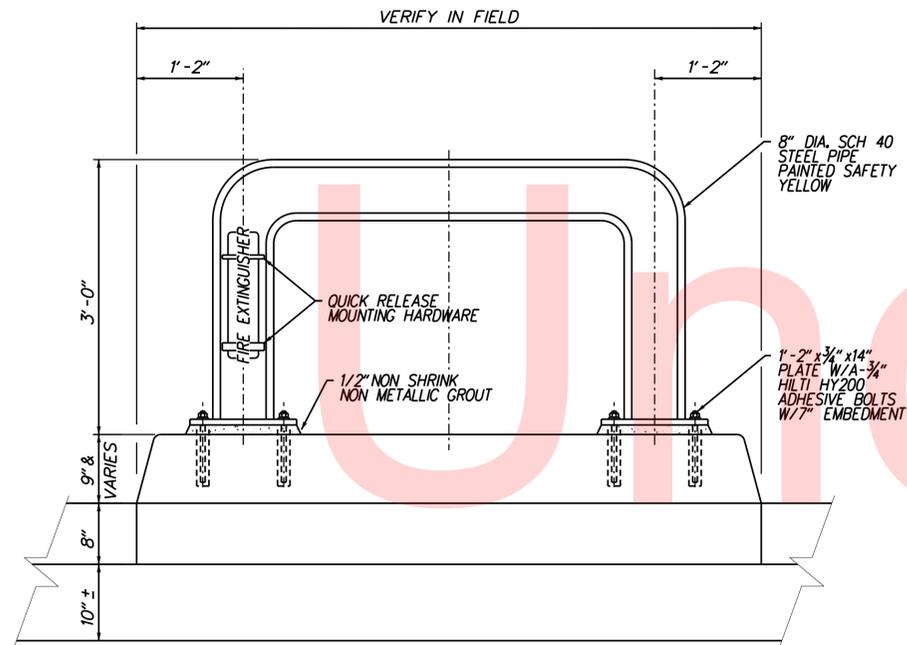
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**NEWARK TOLL PLAZA**  
**195 TUNNEL STAIRS REPLACEMENT**

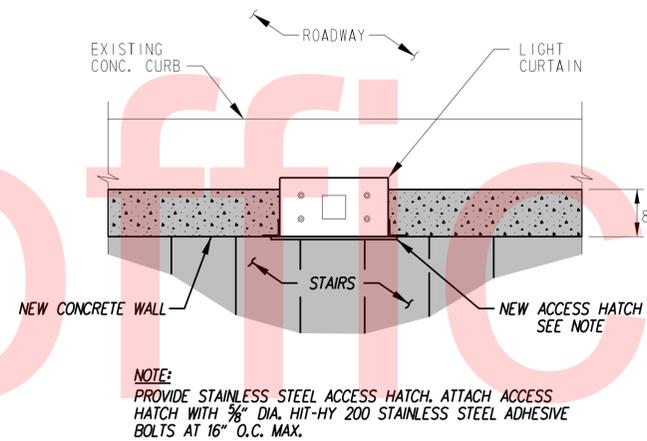
CONTRACT	BRIDGE NO.
COUNTY	DESIGNED BY: NULL
NEW CASTLE	CHECKED BY: JHB

PHOTOGRAPHS

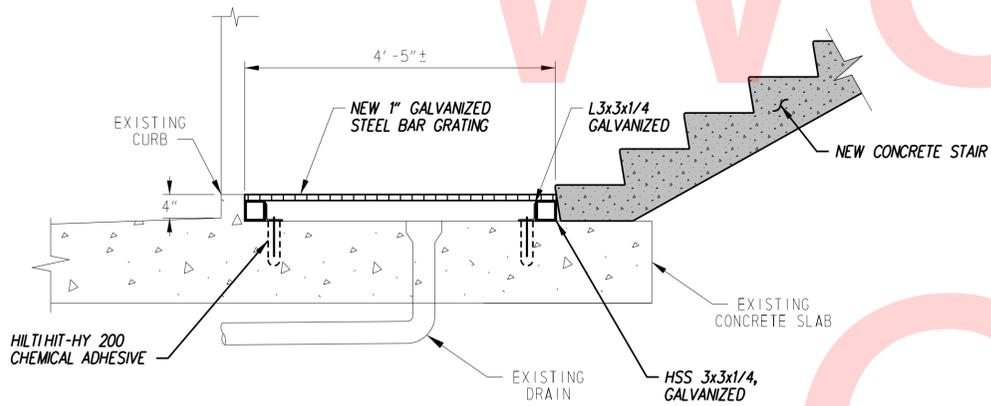
SHEET NO.
10
TOTAL SHTS.
11



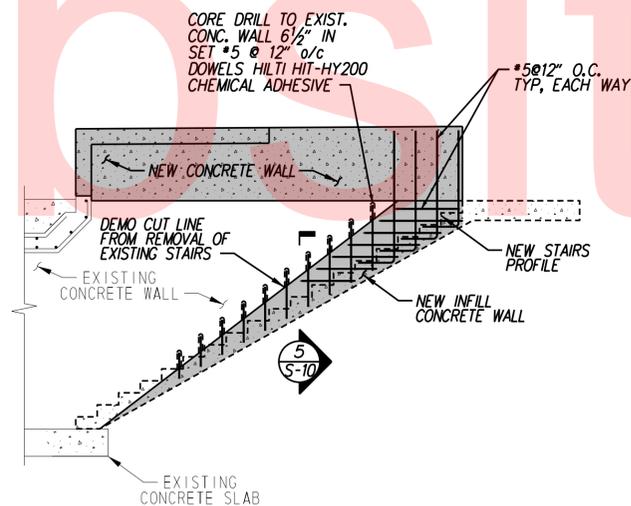
1 BOLLARD DETAIL  
SCALE: NOT TO SCALE



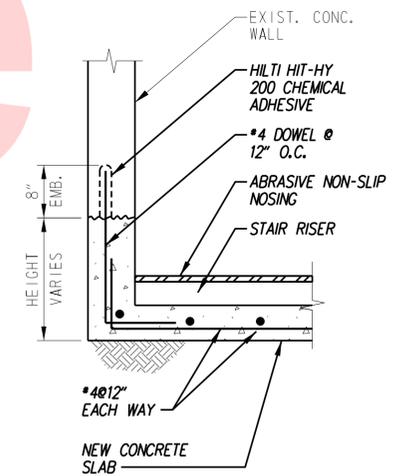
2 LIGHT CURTAIN RECESSED WALL DETAIL  
SCALE: 3/4"=1'-0"



3 BOTTOM LANDING GRATING DETAIL  
SCALE: 3/4"=1'-0"



4 WALL INFILL ELEVATION  
SCALE: NTS



5 WALL INFILL DETAIL  
SCALE: 3/4"=1'-0"

PLOTTED BY: MONTES DATE: 5/9/2016  
FILE LOCATION: Q:\INDE\120995\_01\L1-95\_TOLL\_PLAZA\_STAVCADD\DT.DGN [ SHEET: DT02 ]