ATTACHMENT L

Record Drawings

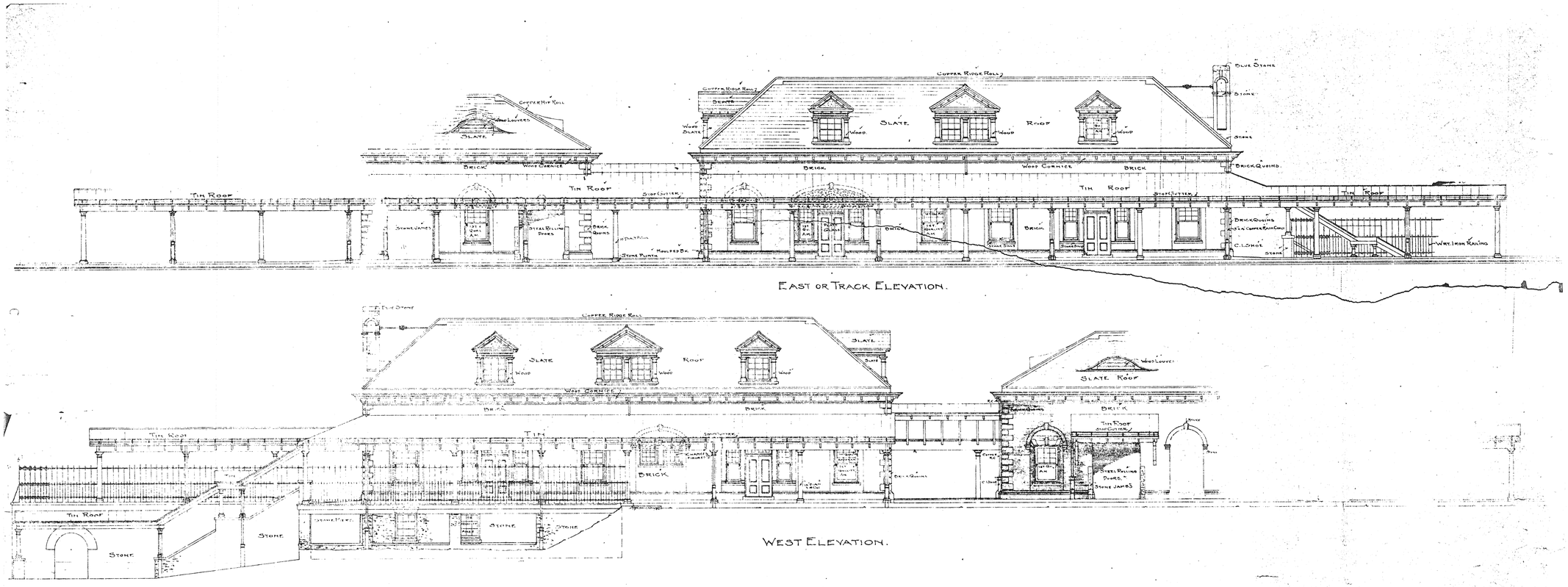
L.1 – 1904 – Passenger Station at Alexandria, VA
L.2 – 1991 – Union Railroad Station Alexandria Virginia Proposed Wheelchair Ramp
L.3 – 1991 – King Street Commuter Rail Station Platform Renovation
L.4 – 1995 – Renovation/Rehabilitation of Alexandria Union Station
L.5 – Undated – Pedestrian Improvements at Alexandria Union Station
L.6 – 1996 – Alexandria Station Platform Repairs

Addendum No. 8

ATTACHMENT L.1

Record Drawings

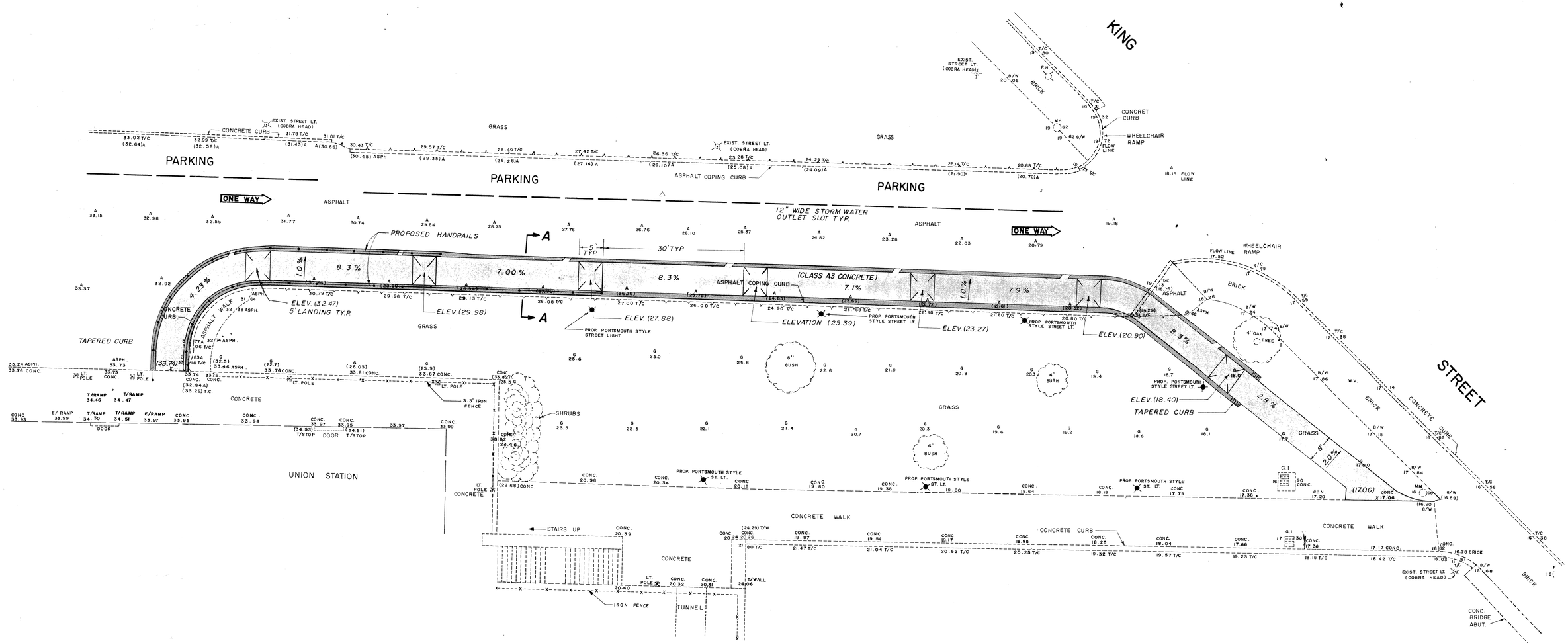
1904
Passenger Station at Alexandria, VA

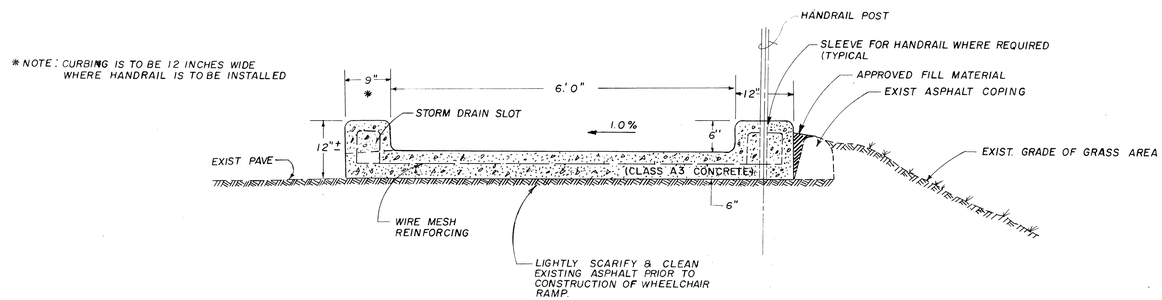

Copper Ridge Roll
Slate
Roof
Wood
Brick
Wood Cornice
Tin Roof
Stone
Blue Stone
Brick Quoins
Wrt. Iron Railing
Steel Rolling Doors
Stone Jambs
Stone Piers
Stone Steps
Slope Down
Stone Plinth
Rolled Bk.
Steel Rolling Doors
Stone Jambs
Brick Quoins and Cornice Raising
C. Lights
Stone Jambs
Stone Sills
Stone Lintels
Stone Arch
Stone Voussoirs
Stone Keystone
Stone Pilasters
Stone Coping
Stone Cornice
Stone Belt Course
Stone Base
Stone Water Table
Stone Steps
Stone Plinth
Stone Quoins

ATTACHMENT L.2

Record Drawings

1991
Union Railroad Station Alexandria Virginia Proposed Wheelchair Ramp





DETAIL A—A

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION RAILROAD STATION ALEXANDRIA VIRGINIA PROPOSED WHEELCHAIR RAMP

Design G. W. BOHR	Date 6-20-91	Field Book	
Drawn TRONG N. NGUYEN	Date 6-23-91	Scale: Horiz. 1" = 10'	Vert.
Survey NAYAK, GORDY....	Date	Index No.	
Checked	Date	As Built	

APPROVED
CHIEF, ENGINEERING & DESIGN — DATE

REVISIONS

SHEET 1 OF 1

ALX_105.1_STA_1_1991_N/A

ATTACHMENT L.3

Record Drawings

1991
King Street Commuter Rail Station Platform Renovation

KLEPPINGER

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION
(CONTRACT NO. 91-9)

VIRGINIA RAILWAY EXPRESS
NVTC/PRTC
ARLINGTON, VIRGINIA

PREPARED BY

ALPHA CORPORATION
45665 WILLOW POND PLAZA
STERLING, VA 22170-4454

IN ASSOCIATION WITH

HERBERT COHEN AND ASSOCIATES
4201 CONNECTICUT AVE. N.W., WASHINGTON, DC 20008
(ARCHITECTURE)

JOHN J. CHRISTIE AND ASSOCIATES
5028 WISCONSIN AVE. N.W., WAHINGTON, DC 20016
(ELECTRICAL/MECHANICAL)

DRAWING INDEX

GENERAL:

G-1: TITLE SHEET
G-2: CONDITION SURVEY PLATFORM AREA
G-3: CONDITION SURVEY ELECTRICAL UTILITIES
G-4: CONSTRUCTION STAGING

STRUCTURAL:

S-1: DEMOLITION PLAN
S-2: RAISED PLATFORM PLAN; SECTIONS AND DETAILS
S-3: TUNNEL AND STAIRWELL REPAIR DETAILS
S-4: CANOPY PLAN, SECTIONS AND DETAILS

ARCHITECTURAL:

A-1: PLATFORM PLAN AND ARCHITECTURAL DETAILS
A-2: CANOPY SOUTH STAIR ARCHITECTURAL PLAN, SECTION AND ELEVATIONS

ELECTRICAL:

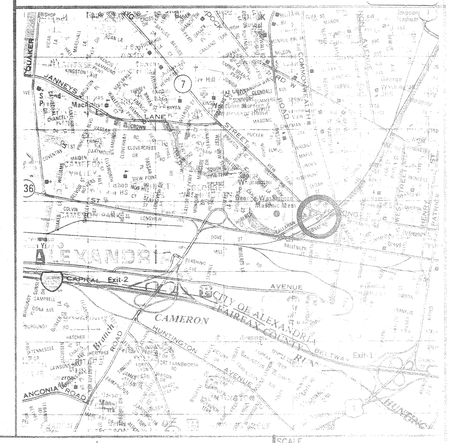
E-1: STATION PLAN, GENERAL NOTES, SYMBOL LIST ELECTRICAL PLAN-CANOPY-SOUTH STAIR
E-2: PART PLAN-ELECTRICAL ROOM, SINGLE LINE DIAGRAM, TUNNEL PLAN, LIGHTING FIXTURE AND PANELBOARD SCHEDULES

PLUMBING:

P-1: PLATFORM, CANOPY AND TUNNEL PLUMBING PLANS, DETAILS AND SECTIONS

ALX_105:1_STA_SET_1991_91-09

LOCATION MAP



REVISIONS					
DESCRIPTION	NO	BY	APP	DATE
CONTRACT NO	1	PA	EH	11/22/91

DESIGNED	PA	11/22/91
DRAWN	DK	11/22/91
CHECKED	PA	11/22/91
APPROVED	EH	11/22/91
		DATE

COMMONWEALTH OF VIRGINIA
E. ITZIG HEINE
CERTIFICATE No. 7424
LICENSED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

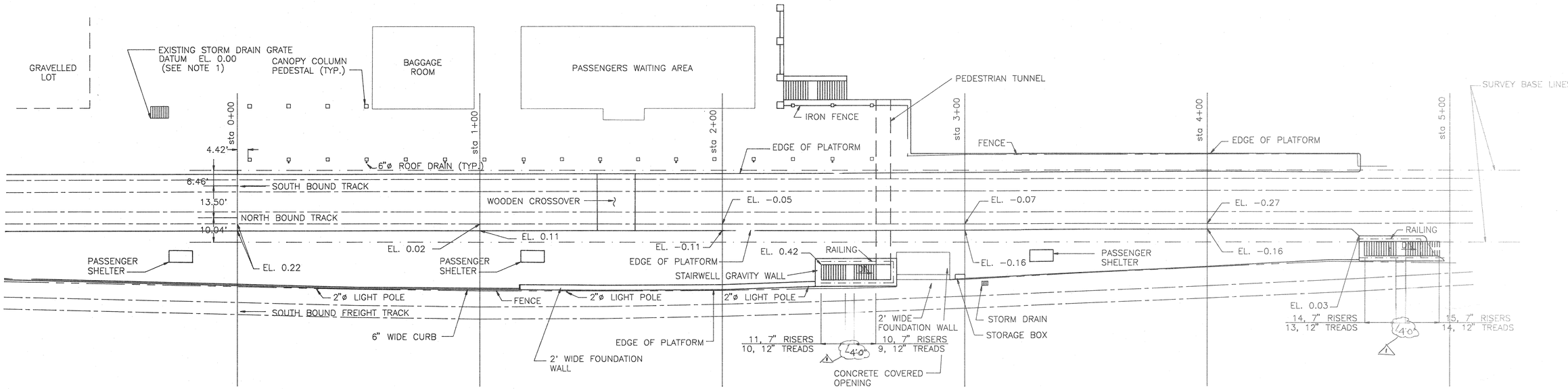
VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

TITLE SHEET

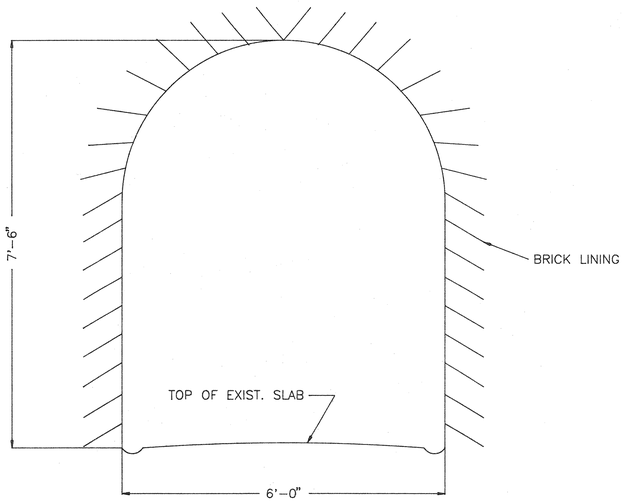
SCALE	NOTED
CONTRACT NO.	91-9
DRAWING NO.	G-1
REV. NO.	1

1 of 13



PLATFORM AREA CONDITION SURVEY PLAN

SCALE 1" = 20'



TUNNEL CROSS SECTION

N.T.S.

NOTES:

1. DATUM (EL. 0.00) IS DEFINED AS THE TOP OF THE SOUTH EAST CORNER OF THE STORM DRAIN GRATE LOCATED AT THE SOUTH END OF THE EXISTING STATION. ALL ELEVATIONS SHOWN ON THE DRAWINGS ARE MEASURED ABOVE (+) OR BELOW (−) THIS POINT.

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	STAIRWELL LANDING LENGTH	1	PA	EH	11/21/91

DESIGNED R.S./P.A. 11/21/91
DRAWN R.S. 11/21/91
CHECKED P.A. 11/21/91
APPROVED E.H. 11/21/91 DATE

COMMONWEALTH OF VIRGINIA
E. ITZIG HEINE
CERTIFICATE No. 7424
CERTIFIED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

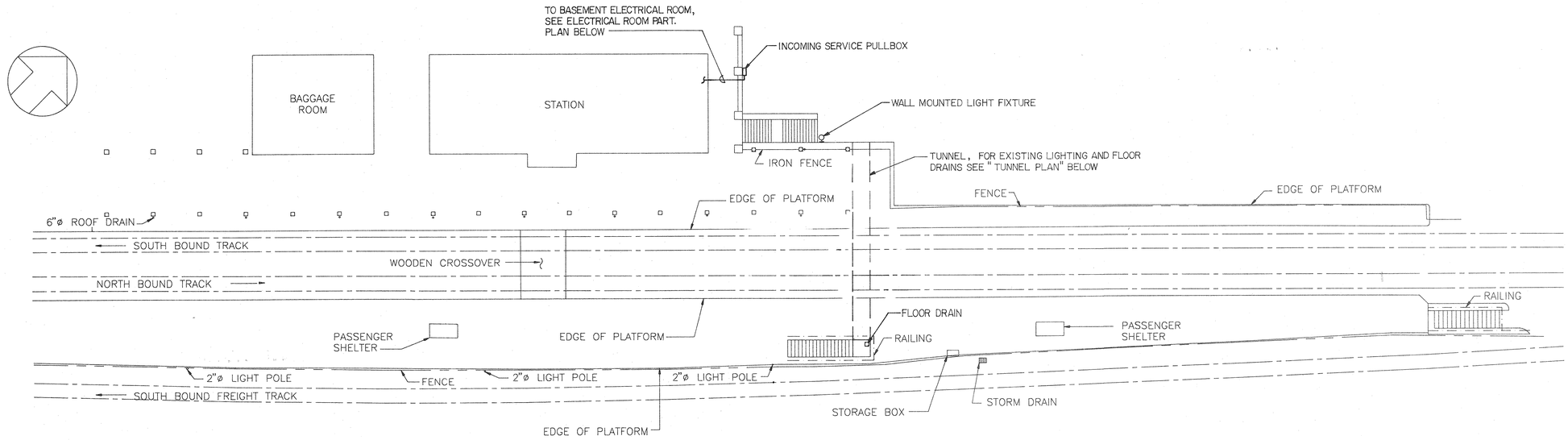
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

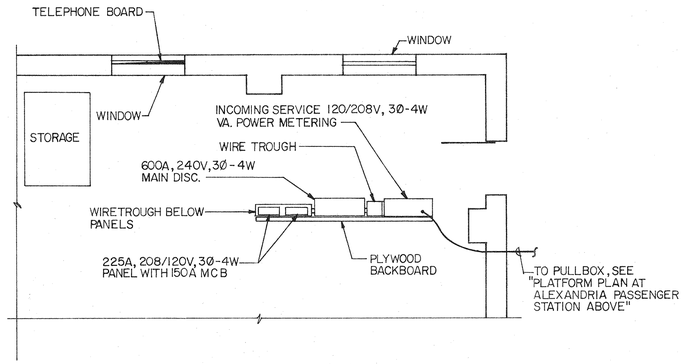
CONDITION SURVEY
PLATFORM AREA

SCALE: NOTED
CONTRACT NO.: 91-9
DRAWING NO.: G-2
REV. NO.:



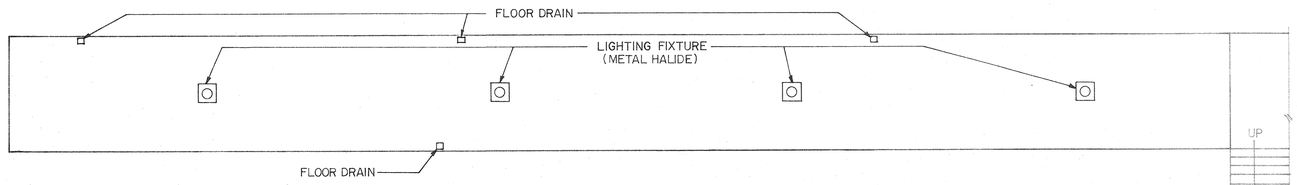
PLATFORM PLAN AT ALEXANDRIA PASSENGER STATION

SCALE 1" = 20'



ELECTRICAL ROOM - PART. PLAN

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



TUNNEL PLAN

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

J. J . CHRISTIE & ASSOCIATES

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	CONTR NO	1	BBS	JJC	11/7/92

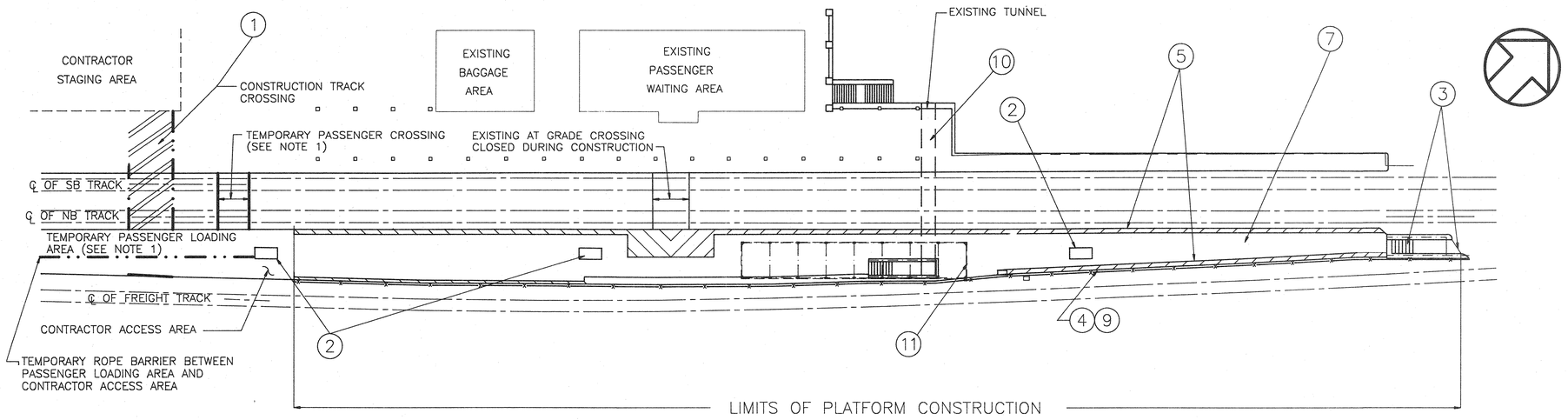
DESIGNED	DP	9/9/91
DRAWN	BS	9/9/91
CHECKED	JJC	11-14-91
APPROVED		DATE

alpha corporation
construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION
CONDITION SURVEY
ELECTRICAL UTILITIES

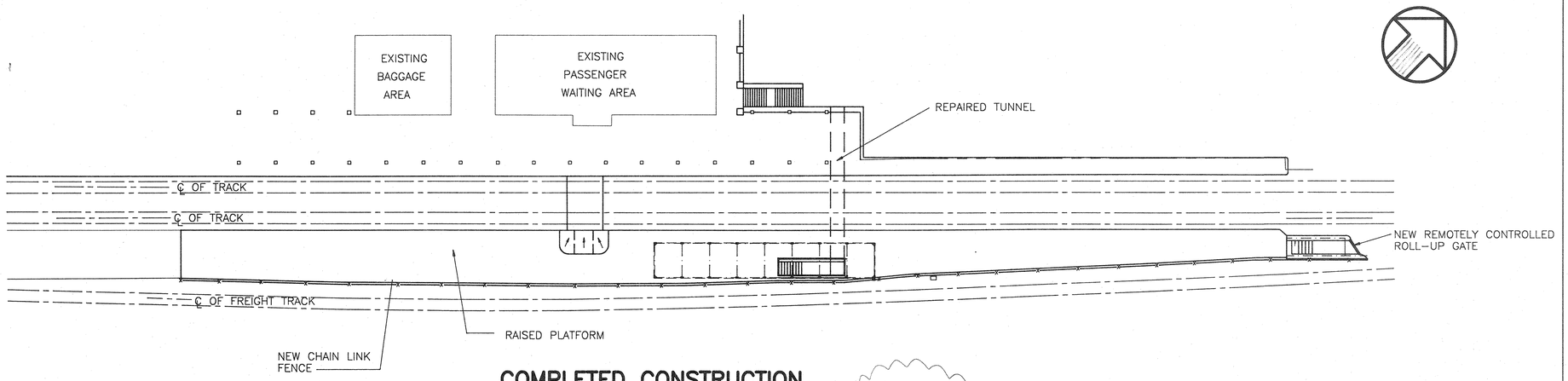
SCALE: AS SHOWN
JOB NO. 91-9
DRAWING NO. G-3
REV. NO. 1



CONSTRUCTION STAGING

CONSTRUCTION STAGING

1. CONTRACTOR STAGING AREA AND TEMPORARY TRACK & PEDESTRIAN CROSSING TO ISLAND PLATFORM. USE DESIGNATED CONTRACTOR AREA FOR ACCESS TO PLATFORM. PROVIDE TEMPORARY ROPE BARRIER TO SEPARATE PASSENGERS FROM CONTRACTOR'S ACCESS AREA.
2. REMOVE AND SALVAGE PASSENGER SHELTERS. STORE SHELTERS IN UNDAMAGED CONDITION AT AMTRAK DESIGNATED LOCATION. COORDINATE WITH AMTRAK.
3. REPAIR KING STREET STAIRWELL AND INSTALL NEW GATE.
4. REMOVE EXISTING CHAIN LINK FENCE. PROVIDE TEMPORARY ROPE BARRIER TO RESTRICT ACCESS TO THE FREIGHT TRACK.
5. DEMOLISH EXISTING PLATFORM AND SELECTED ITEMS ON THE PLATFORM TO LIMITS SHOWN ON DWG. S-1.
6. COMPLETE ALL UTILITY WORK. SEE DWGS. P-1 AND E-1 FOR DETAILS.
7. CONSTRUCT RAISED PLATFORM. SEE DWG. S-2 FOR DETAILS. USE EXISTING TUNNEL FOR PUMPING CONCRETE TO THE PLATFORM.
8. INSTALL NEW LIGHT POLES ON RAISED PLATFORM SEE DWG E-1 FOR LOCATIONS.
9. REMOVE TEMPORARY ROPE BARRIER AND INSTALL NEW CHAIN LINK FENCE.
10. REPAIR TUNNEL AND TUNNEL STAIRWELL. SEE DWGS. S-3 AND E-2 FOR DETAILS.
11. CONSTRUCT CANOPY STRUCTURE AND INSTALL ELECTRICAL EQUIPMENT AND SIGNAGE. SEE DWGS. S-4, A-1, A-2, P-1, E-1 AND E-2.



COMPLETED CONSTRUCTION

NOTES

1. CONTRACTOR PROVIDE TEMPORARY CONSTRUCTION & PASSENGER TRACK CROSSINGS AS SPECIFIED IN DWG. S-1. COORDINATE WITH R. F. & P. AND AMTRAK SO THAT PASSENGER SERVICE FROM THE PLATFORM REMAINS . UNINTERRUPTED
2. FOR LIMITS OF DEMOLITION SEE DWG. S-1.
3. FOR DETAILS OF NEW PLATFORM SEE DWG. S-2.
4. FOR TUNNEL AND STAIRWELL REPAIR DETAILS SEE DWG. S-3.
5. FOR CANOPY DETAILS SEE DWG. S-4.

Russ Pabst
RF&P Properties
540-4433
late Sept '91

REVISIONS					
DESCRIPTION	NO	BY	APP	DATE	

DESIGNED	P.A.	11/21/91
DRAWN	R.S.	11/21/91
CHECKED	P.A.	11/21/91
APPROVED	E.H.	11/21/91
		DATE

COMMONWEALTH OF VIRGINIA
E. ITZIG HEINE
CERTIFICATE No. 7424
REGISTERED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

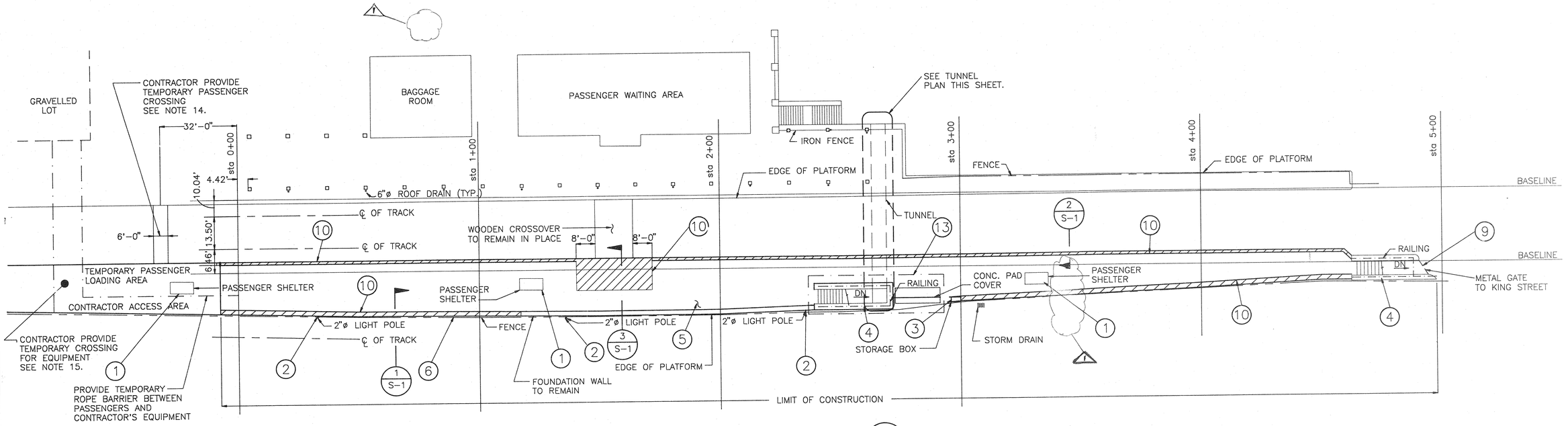
45665 Willow Pona Plaza
Sterling, VA 22170
703/709- 2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

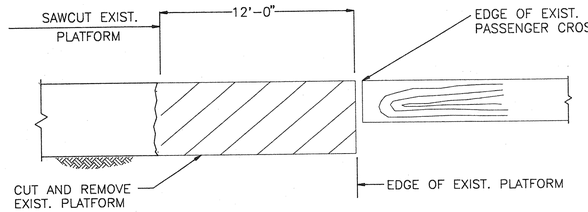
KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

CONSTRUCTION STAGING

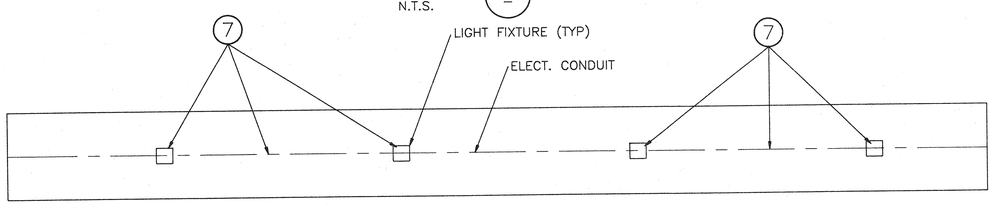
SCALE: NOT TO SCALE
CONTRACT NO.: 91-9
DRAWING NO.: G-4
REV. NO.:



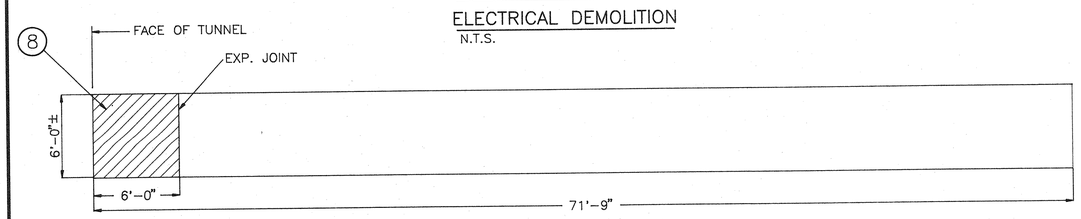
DEMOLITION PLAN
SCALE: 1" = 20'-0"



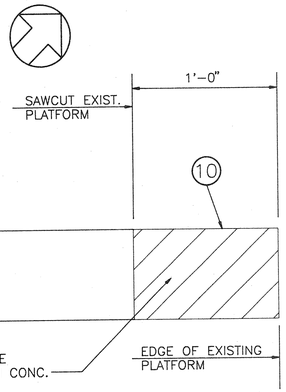
SECTION 3 / N.T.S.



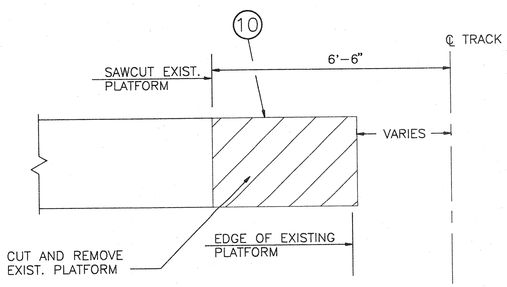
TUNNEL CEILING PLAN
ELECTRICAL DEMOLITION
N.T.S.



TUNNEL FLOOR PLAN
DEMOLITION
N.T.S.



SECTION 1 / N.T.S.



SECTION 2 / N.T.S.

DEMOLITION NOTES

1. REMOVE AND STORE SHELTERS IN UNDAMAGED CONDITION AT AMTRAK DESIGNATED LOCATION. COORDINATE WITH AMTRAK.
2. DISCONNECT ELECTRICAL SERVICE TO LIGHT POLES. REMOVE LIGHT POLES.
3. REMOVE METAL STORAGE BOX.
4. REMOVE EXISTING STAIR RAILING AND REPLACE WITH NEW.
5. REMOVE EXISTING ASPHALT OVERLAY ON PLATFORM SLAB TO TOP OF CONCRETE.
6. REMOVE CHAIN LINK FENCE AND REPLACE WITH NEW. PROVIDE TEMPORARY ROPE BARRIER TO RESTRICT ACCESS TO FREIGHT TRACK DURING CONSTRUCTION.
7. DISCONNECT AND REMOVE CONDUIT AND LIGHT FIXTURES AND REPLACE WITH NEW CONDUIT AND NEW LIGHT FIXTURES. SEE DWG. E-2 FOR DETAILS.
8. CUT AND REMOVE SLAB SECTION AT TUNNEL. REPLACE WITH NEW SLAB AS SHOWN ON DWG. S-3.
9. REMOVE EXISTING METAL GATE AND REPLACE WITH NEW REMOTELY CONTROLLED GATE.
10. SAW CUT AND REMOVE PLATFORM SECTIONS AS SHOWN IN SECTIONS 1, 2 AND 3 THIS SHEET.
11. DEMOLITION WORK SHALL BE COORDINATED WITH R.F.& P. AND ON-SITE FLAGMAN TO ENSURE SAFETY AND UNINTERRUPED PASSENGER SERVICE AT THE STATION.
12. DEMOLITION DEBRIS SHALL BE REMOVED INMEDIATELY FROM THE PROJECT SITE IN ACCORDANCE WITH LOCAL JURISDICTION REGULATIONS.
13. DURING DEMOLITION AND CONSTRUCTION CONTRACTOR'S EQUIPMENT SHALL NOT BE PARKED WITHIN DESIGNATED RESTRICTED AREAS SHOWN ON THE PLAN.
14. TEMPORARY PASSENGER CROSSING SHALL BE PROVIDED BY CONTRACTOR. THE TOP OF THE CROSSING SHALL BE FLUSH WITH THE TOP OF RAIL AND SHALL ALLOW ADEQUATE CLEARANCE FOR TRAIN WHEELS. ALLOWABLE LL = 100 PSF.
15. TEMPORARY CROSSING FOR EQUIPMENT SHALL BE CONSTRUCTED OF GRAVEL PLACED UP TO THE LEVEL OF THE TOP OF RAIL. THE GRAVEL SHALL BE PLACED OVER GEOTEXTILE FABRIC TO PROTECT EXISTING BALLAST. MAXIMUM WEIGHT OF EQUIPMENT ALLOWED ON PLATFORM SHALL BE 2 TONS.

REVISIONS

NO	DESCRIPTION	BY	APP	DATE
1	MISC NOTATIONS	PA	EH	11/21/91

DESIGNED	P.A.	11/21/91
DRAWN	D.K.	11/21/91
CHECKED	P.A.	11/21/91
APPROVED	E.H.	11/21/91

COMMONWEALTH OF VIRGINIA — E. ITZIG HEINE — CERTIFICATE No. 7424 — CERTIFIED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

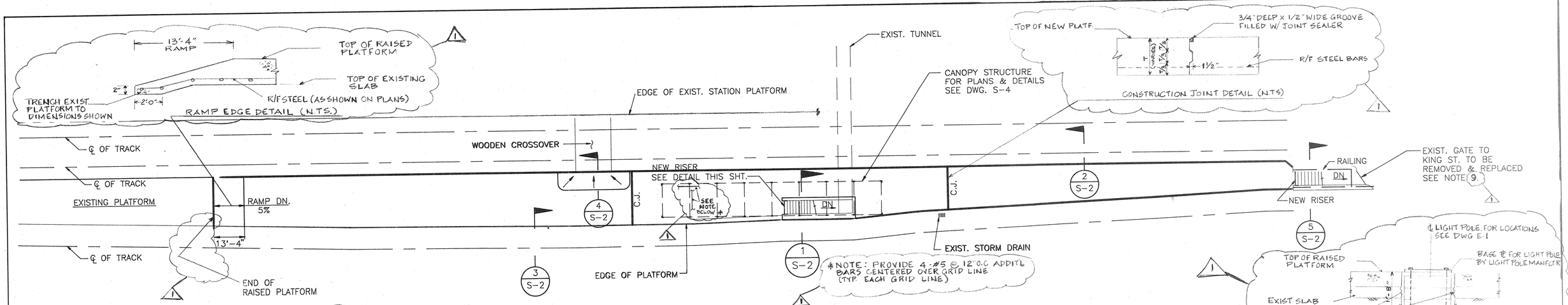
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGIN'A

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

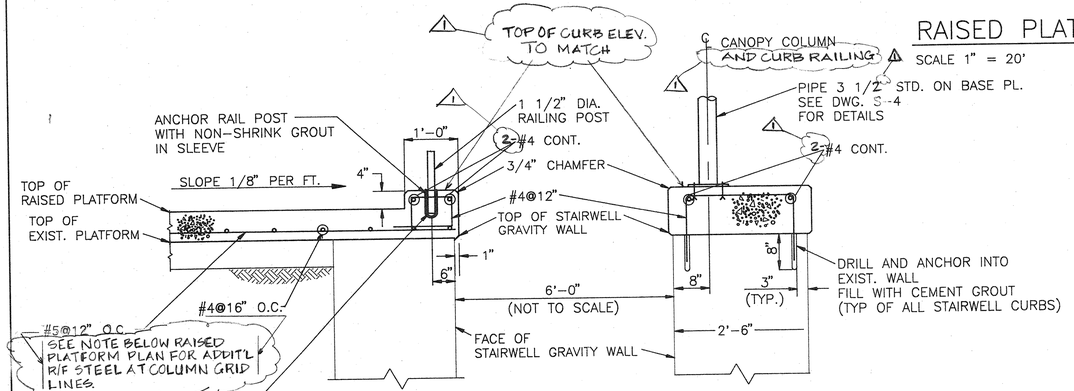
DEMOLITION PLAN

SCALE: NOTED
CONTRACT NO.: 91-9
DRAWING NO.: S-1
REV. NO.: 1



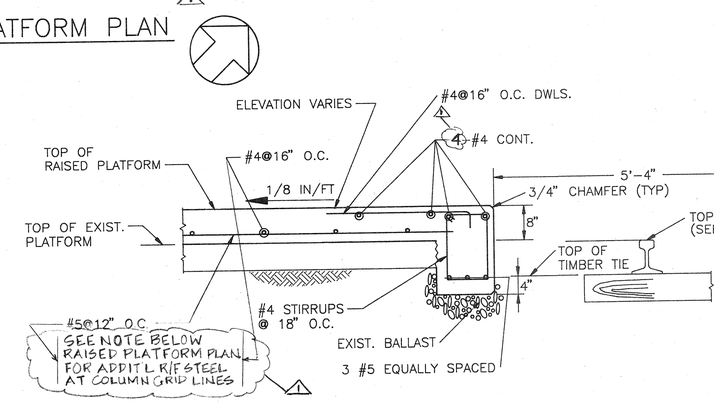
RAISED PLATFORM PLAN

SCALE 1" = 20'



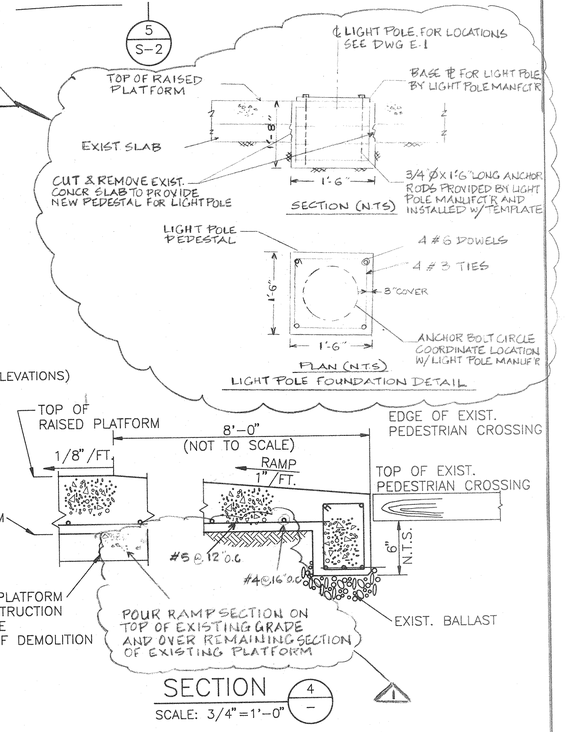
CURB DETAIL AT TUNNEL STAIRWELL

SECTION 1 — SCALE: 3/4"=1'-0"

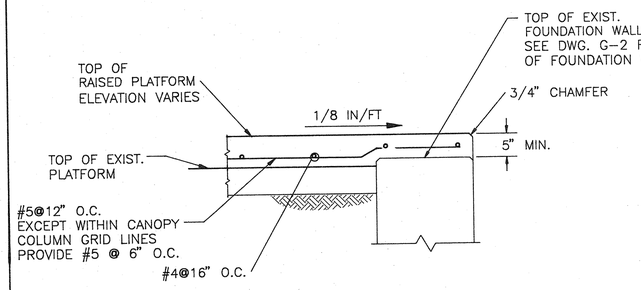


TYPICAL DETAIL AT THE WEST EDGE OF THE PLATFORM

SECTION 2 — SCALE: 3/4"=1'-0"

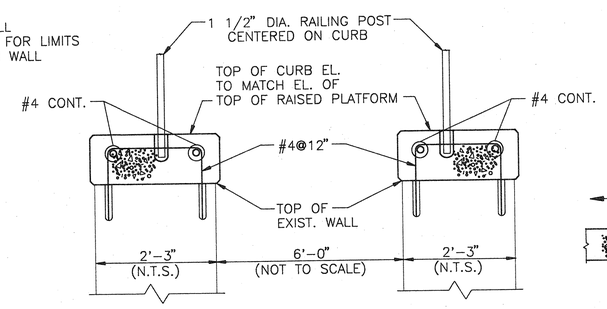


SECTION 4 — SCALE: 3/4"=1'-0"



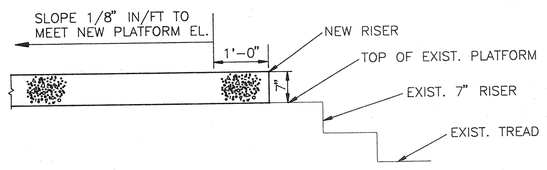
TYPICAL DETAIL AT FOUNDATION WALL SUPPORTED EDGE OF THE PLATFORM

SECTION 3 — SCALE: 3/4"=1'-0"



CURB DETAIL AT KING STREET STAIRWELL

SECTION 5 — SCALE: 3/4"=1'-0"



NEW RISER DETAIL

SCALE: 3/4"=1'-0"

NOTES:

1. PLATFORM DESIGN LIVE LOAD = 100 LBS/SQ. FT.
2. ALL STRUCTURAL CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 318-89 BUILDING CODE.
3. MINIMUM ULTIMATE CONCRETE STRENGTH AT 28 DAYS SHALL BE 3,000 PSI. UNLESS OTHERWISED NOTED.
4. MAXIMUM AGGREGATE SIZE SHALL BE 3/4" EXCEPT FOR OVERLAYS SHALL BE 1/2".
5. ALL CONCRETE SHALL BE AIR ENTRAINED (MIN. 5% AIR ENTRAINMENT).
6. CONCRETE COVER SHALL BE AS FOLLOWS:
   - FOUNDATIONS 3"
   - SLABS POURED OVER CONCRETE: 1 1/2"
   - FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: 2"
7. REINFORCING STEEL BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" LATEST EDITION.
8. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
9. REPLACE EXIST. METAL GATE TO KING STREET WITH NEW REMOTELY OPERATED ROLL-UP GATE MANUFACTURED BY ATLAS OR EQUIVALENT. NEW GATE TO BE INSTALLED AT THE LOCATION OF THE EXISTING GATE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	REV. PLAN, SEC 1, SEC 2, SEC 4, NOTE 3; RAMP @ SOUTH END; C.J. DETAIL; LIGHT POLE FDN DETAIL	1	PA	EH	11/21/91

DESIGNED	R.S./P.A.	11/21/91
DRAWN	R.S.	11/21/91
CHECKED	P.A.	11/21/91
APPROVED	E.H.	11/21/91
		DATE

COMMONWEALTH OF VIRGINIA — E. ITZIG HEINE — CERTIFICATE No. 7424 — CERTIFIED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

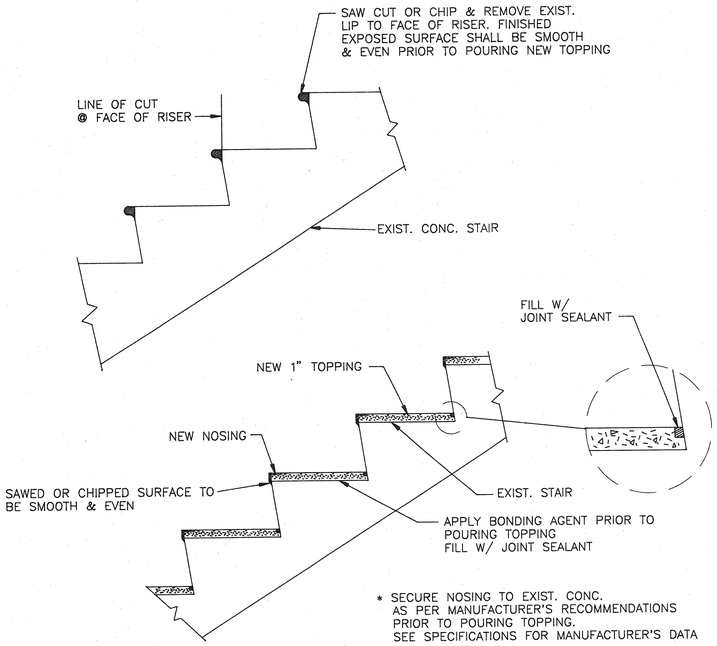
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

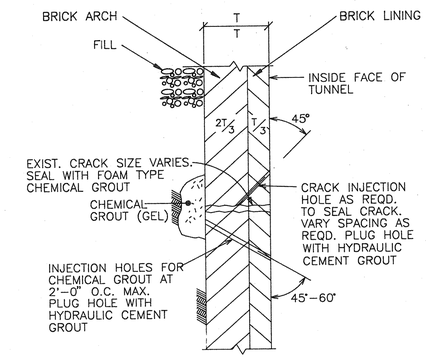
RAISED PLATFORM PLAN, SECTIONS & DETAILS

SCALE: NOTED
CONTRACT NO.: 91-9
DRAWING NO.: S-2
REV. NO.: 1



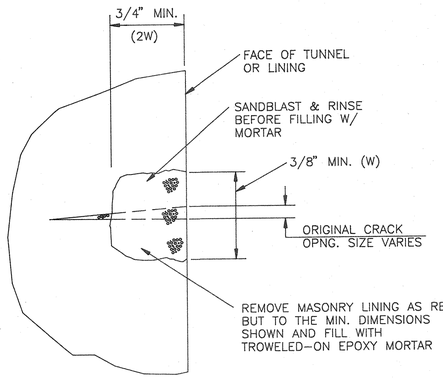
TYPICAL STAIR REPAIR DETAIL

DETAIL 1 N.T.S.



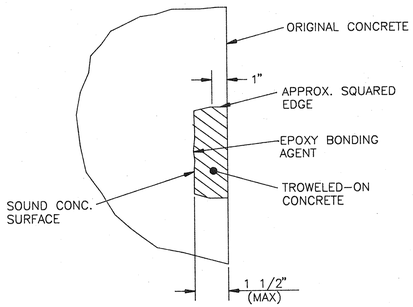
LEAKING CRACK REPAIR

DETAIL 2 N.T.S.



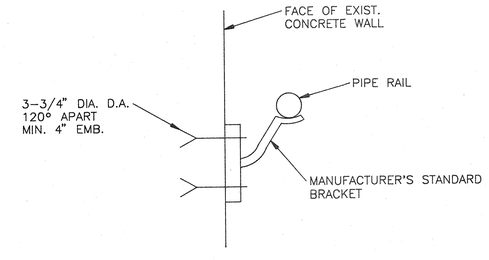
NON-LEAKING CRACK REPAIR

DETAIL 3 N.T.S.



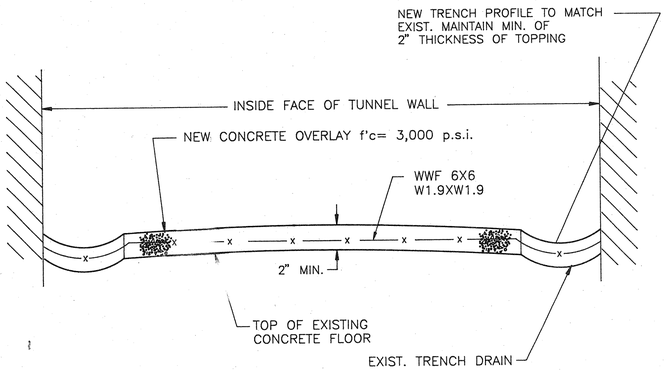
SPALL REPAIR

DETAIL 7 N.T.S.



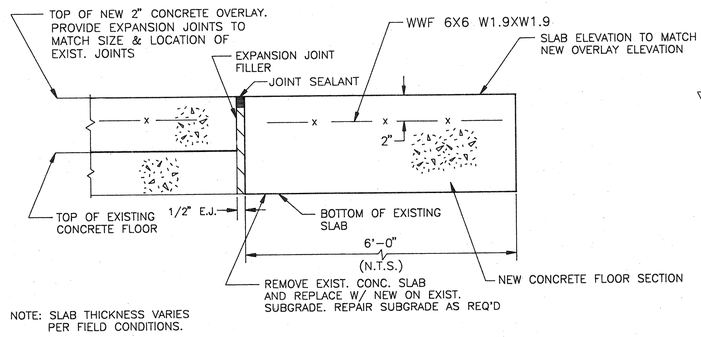
RAIL ANCHOR

DETAIL 8 N.T.S.



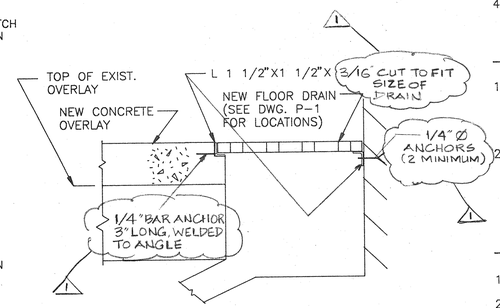
TUNNEL FLOOR OVERLAY

DETAIL 4 N.T.S.



TUNNEL CONCRETE FLOOR SECTION REPLACEMENT

DETAIL 5 N.T.S.



TUNNEL FLOOR DRAIN REPAIR

DETAIL 6 N.T.S.

NOTES

LEAKING CRACK REPAIR

1. USE LEAKING CRACK REPAIR METHOD FOR CRACKS 1/8" THICK OR WIDER INSIDE THE TUNNEL. SEE BID FORM FOR MINIMUM BID QUANTITIES. (1)
2. SCRAPE AND CLEAN SURFACE OF ALL PRECIPITATE AND RESIDUE ALONG THE TRACE OF THE CRACK. REMOVE ALL LOOSE MATERIALS AND DEPOSITS INSIDE THE CRACK BY SCRAPING AND CLEANING WITH AIR BLAST PRIOR TO REPAIR.
3. INJECT CHEMICAL GROUT BEHIND WALL AT CRACK LOCATION TO MAKE THE JOINT WATER TIGHT.
4. CRACK WILL BE REPAIRED AFTER CHEMICAL GROUTING AT CRACK LOCATION HAS BEEN COMPLETED.
5. PROVIDE GROUT HOLES AS REQUIRED FOR CRACK REPAIR WITH MINIMUM TWO GROUT HOLES PER CRACK. START PUMPING GROUT AT THE LOWEST INJECTION HOLE AND CONTINUE IN LINE TO THE TOP.
6. IF CAVITIES ARE FOUND BEHIND WALL AT CRACK LOCATION, INJECT CEMENTITIOUS GROUT PRIOR TO CHEMICAL GROUT AS PER SPECIFICATIONS.
7. FOR MEASUREMENT PURPOSES CRACK LENGTH SHALL BE MEASURED ALONG THE SURFACE TRACE OF THE CRACK AT STRAIGHT CHORD LENGTHS OF 2 FEET.
8. AFTER ALL REPAIR IS DONE PAINT INTERIOR SURFACES OF TUNNEL AND STAIR ENCLOSURES WITH TWO COATS OF ACRYLIC LATEX FINISH. APPLY FLAT LATEX-BASED PRIMER TO BARE CONCRETE AND PLASTERED SURFACES PRIOR TO APPLICATION OF FINISH COATS. REMOVE ALL EXISTING LOOSED PAINT FROM TUNNEL SURFACES PRIOR TO APPLICATION OF NEW PAINT. COMPLY WITH ALL PAINT MANUFACTURER'S REQUIREMENTS. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

NON-LEAKING CRACK REPAIR

1. SEE DETAIL 3 FOR PROCEDURE.

SPALLED CONCRETE REPAIR

1. REMOVE SPALLED CONCRETE.
2. APPLY MORTAR BY HAND TROWEL. MORTAR SHALL BE FIRMLY PRESSED ONTO PREPARED SPALLED SURFACE. APPLY EPOXY BONDING AGENT TO CLEANED EXISTING CONCRETE SURFACES PRIOR TO APPLICATION OF MORTAR.
3. REBUILD SPALLED CONCRETE SURFACE TO THE PLANE OF THE ORIGINAL CONCRETE SURFACE.
4. CONCRETE 28-DAY COMPRESSIVE STRENGTH SHALL BE F'c = 4,000 PSI.

STAIR REPAIR

1. ROUGHEN & CLEAN EXISTING SURFACE OF ALL LOOSE MATERIALS, OIL, GREASE & DIRT.
2. WASH & DRY SURFACE TO REMOVE ALL DUST & DIRT PRIOR TO APPLYING BONDING AGENT.
3. APPLY BONDING AGENT PRIOR TO POURING TOPPING, AS PER MANUFACTURER'S RECOMMENDATIONS.
4. TOPPING TO HAVE MIN. 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. MAX. SIZE OF AGGREGATE SHALL BE 3/8".

TUNNEL FLOOR REPAIR

1. THE DAMAGED FLOOR SECTION AT THE WEST ENTRANCE OF THE TUNNEL SHALL BE REPLACED BY A NEW REINFORCED PAD AS SHOWN ON DETAIL 5, THIS SHEET. FOR EXTENT OF DAMAGED FLOOR SEE DWG. S-1.
2. THE REMAINING TUNNEL FLOOR SHALL BE COVERED WITH A 2" CONC. OVERLAY CONSTRUCTED AS SHOWN ON DETAIL 4, THIS SHEET. ROUGHEN EXIST. TOP OF CONC., REMOVE ALL LOOSE MATERIALS AND APPLY EPOXY BONDING AGENT PRIOR TO POURING CONC. OVERLAY.

KING STREET STAIRWELL WALL REPAIR

1. REMOVE SPALLED OR DAMAGED CONCRETE OVERLAY AREAS .
2. CLEAN CONCRETE SURFACE AND APPLY NEW CONCRETE OVERLAY TO MATCH THE EXISTING.
3. PAINT WALLS.

SURFACE CLEANING (1)

1. COMPLETELY REMOVE EFLORESCENCE AND OTHER DEPOSITS FROM WALLS AND EXTERIOR FACE OF TUNNEL PRIOR TO CRACK REPAIR

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	REV. NOTE #1. LEAK'G CRACK RPR; DET. 6; SURF. CLN'G NOTE	1	PA	EH	11/27/91

DESIGNED	P.A.	11/21/91
DRAWN	D.K.	11/21/91
CHECKED	P.A.	11/21/91
APPROVED	E.H.	11/21/91
		DATE

COMMONWEALTH OF VIRGINIA — E. ITZIG HEINE — CERTIFICATE No. 7424 — Certified Professional Engineer

alpha corporation construction & engineering

45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

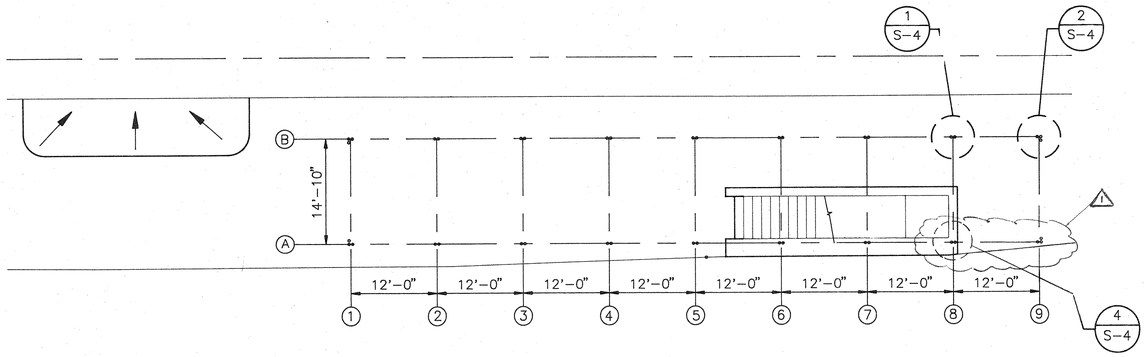
VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

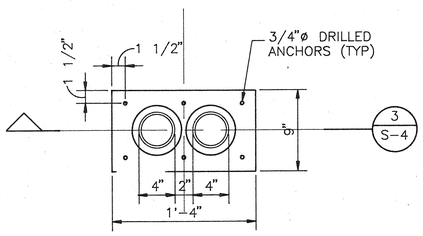
TUNNEL AND STAIRWELL REPAIR DETAILS

SCALE: NOT TO SCALE
CONTRACT NO. 91-9
DRAWING NO. S-3
REV. NO. 1

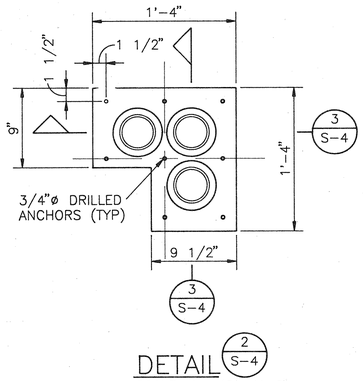
7 of 13



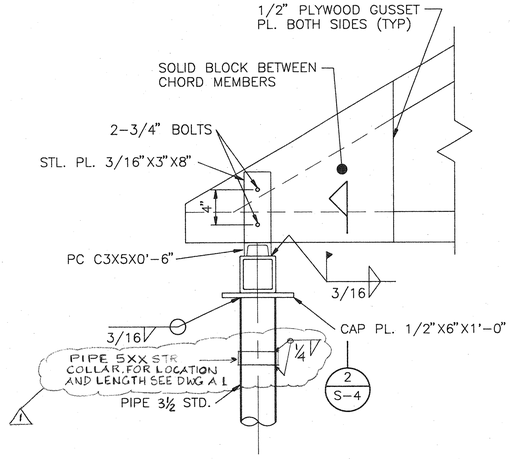
COLUMN LAYOUT PLAN
SCALE: 1"=10'-0"



DETAIL 1 S-4
SCALE: 1 1/2"=1'-0"

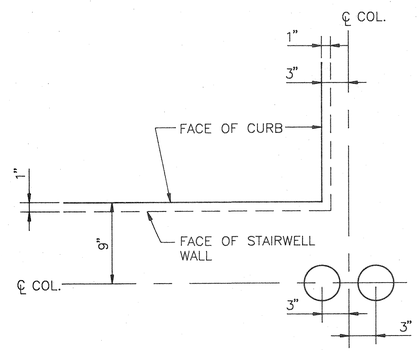


DETAIL 2 S-4
SCALE: 1 1/2"=1'-0"



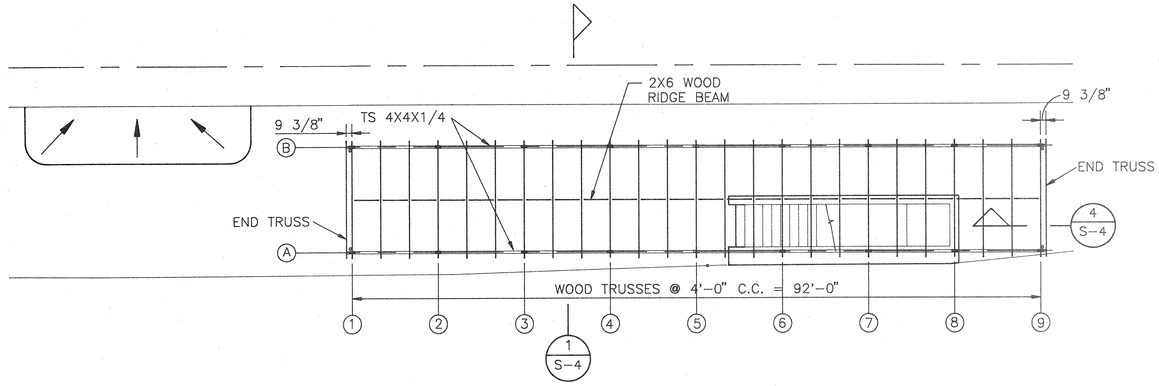
DETAIL 3 S-4
SCALE: 1 1/2"=1'-0"

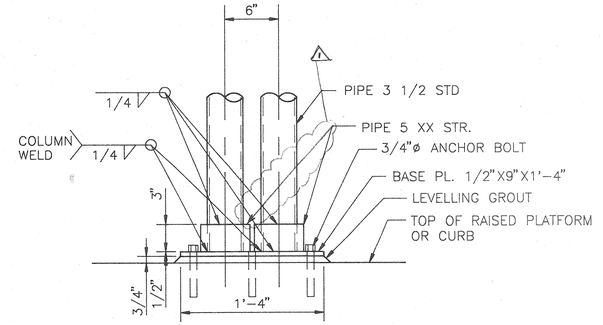
NOTE: FOR WOOD TRIM AROUND COL. SEE ARCH'L DWG.



DETAIL 4 S-4
SCALE: 1 1/2"=1'-0"

CANOPY FRAMING PLAN
SCALE: 1"=10'-0"





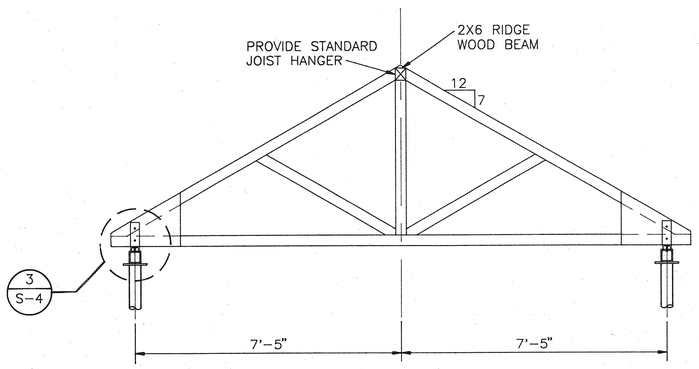
SECTION 3 S-4
SCALE: 1 1/2"=1'-0"

STRUCTURAL NOTES:

1. DESIGN ROOF LIVE LOAD = 25PSF
2. STRUCTURAL STEEL COMPONENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE NINTH EDITION OF THE AISC SPECIFICATION FOR STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN. STRUCTURAL STEEL SHOP DRAWINGS, PREPARED BY THE STEEL SUBCONTRACTOR AND SHOWING COMPLETE DIMENSIONS AND DETAILS, SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION OF THE STEEL COMPONENTS. THE STRUCTURAL STEEL SUBCONTRACTOR SHALL CHECK, VERIFY AND COORDINATE DIMENSIONS AND DETAILS WITH THE STRUCTURAL AND OTHER PORTIONS OF THE CONTRACT DRAWINGS.
   COLD FORMED COMPONENTS: COLD FORMED STEEL MEMBERS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE 1986 AISI SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS. ROOF PANELS SHALL BE 24 GAUGE ZINC COATED SHEETS WITH 1.9 MILS THICK PROTECTIVE GALVALUME COATING PER ASTM A792. ROOF CHANNELS SHALL BE 18 GAUGE GALVANIZED SECTIONS, 1" WIDE BY 1-1/2" HIGH, WITH Fy = 35 KSI.
3. STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO:
   A. TUBING AND PIPE - ASTM A501 (Fy = 36 KSI) OR ASTM A53 GRADE B (Fy = 35 KSI).
   B. ALL OTHER STRUCTURAL STEEL - ASTM A 36 (Fy = 36 KSI)
4. STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
   A. BOLTED CONNECTIONS, WHERE REQUIRED, SHALL BE MADE USING 3/4" DIA. (MINIMUM) ASTM A325 FRICTION TYPE HIGH STRENGTH BOLTS.
   B. ANCHOR BOLTS, LEVELING PLATES, OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESET BY TEMPLATES OR SIMILAR METHODS. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK GROUT.
5. ALL WELDING SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY (A.W.S.) AND AS INDICATED ON THE STRUCTURAL DRAWINGS. ANY STRUCTURAL STEEL DAMAGED IN WELDING TO BE REPLACED OR ACCEPTABLY REINFORCED. WELDING ELECTRODES SHALL CONFORM TO A.S.T.M. A233, E60 SERIES. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS ONLY.
6. DRILLED ANCHORS SHALL BE 3/4" DIA. STAINLESS STEEL UNLESS OTHERWISE NOTED. PROVIDE MINIMUM EMBEDMENT INTO CONCRETE OF SIX (6) INCHES.
7. STRUCTURAL LUMBER: ALL STRUCTURAL WOOD MEMBERS SHALL BE STRESS GRADED LUMBER WITH THE FOLLOWING MINIMUM UNIT STRESSES:

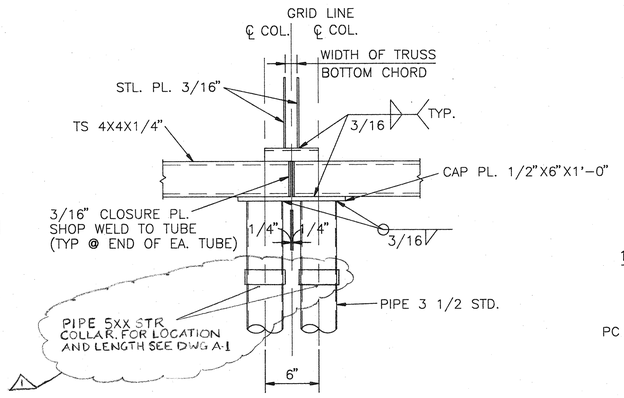
EXTREME FIBER STRESS IN BENDING	1,300 PSI
COMPRESSION PARALLEL TO GRAIN	1,200 PSI
COMPRESSION PERPENDICULAR TO GRAIN	405 PSI
TENSION PARALLEL TO GRAIN	675 PSI
MODULUS OF ELASTICITY	1,700,000 PSI

STRESS GRADE LUMBER SHALL BE CLEARLY STAMPED WITH THE LUMBER INSPECTION ASSOCIATION SEAL SHOWING THE STRESS GRADE. ALL FABRICATION, ERECTION AND OTHER PROCEDURES SHALL CONFORM TO THE CURRENT "NATIONAL DESIGN SPECIFICATION FOR STRESS GRADE LUMBER AND ITS FASTENINGS".
WOOD TRUSSES: WOOD TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER FOR THE SPAN, CONFIGURATION AND LOADING CONDITIONS INDICATED ON THE DRAWINGS. DESIGN AND DETAIL OF ALL TRUSSES SHALL MEET THE REQUIREMENTS OF ALL APPLICABLE BUILDING CODES AND SHALL BE IN ACCORDANCE WITH THE "NATIONAL SPECIFICATION FOR STRESS GRADE LUMBER AND ITS FASTENINGS". COMPLETE SHOP DETAILS, STRESS DIAGRAMS AND BEARING DETAILS SHALL BE SUBMITTED FOR APPROVAL BEFORE FABRICATION OF TRUSSES. IN LIEU OF STRESS DIAGRAMS MANUFACTURER'S TEST DATA MAY BE SUBMITTED SHOWING THE ALLOWABLE CAPACITY OF THE MEMBERS.
TRUSSES SHALL BE FABRICATED WITH 1/2" THICK EXTERIOR GRADE PLYWOOD GUSSETS ON EACH SIDE. GUSSET PLATES SHALL BE GLUED (EXTERIOR TYPE GLUE) AND NAILED TO THE TRUSS MEMBERS. THE NAILS SHALL NOT PROJECT BEYOND THE FACE OF THE PLYWOOD. CONNECTIONS SHALL BE CAPABLE OF TRANSMITTING THE STRESSES PLUS ALL ECCENTRICITIES.

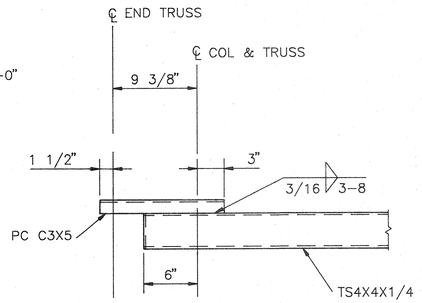


SECTION 1 S-4
SCALE: 1/2"=1'-0"

NOTE: 1. ALL TRUSS MEMBERS TO BE 2X4
2. PROVIDE PLYWOOD GUSSET PLATES. SEE SPECS.



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



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

NOTE: COL. & CAP PL. NOT SHOWN

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
DET 4/COL LAYOUT PLAN, DET 3, SEC 2, SEE 3		1	PA	EH	1/3/92

DESIGNED	PA	11/22/91
DRAWN	DK	11/22/91
CHECKED	PA	11/22/91
APPROVED	EH	11/22/91
		DATE

COMMONWEALTH OF VIRGINIA — E. ITZIG HEINE — CERTIFICATE No. 7424 — LICENSED PROFESSIONAL ENGINEER

alpha corporation
construction & engineering

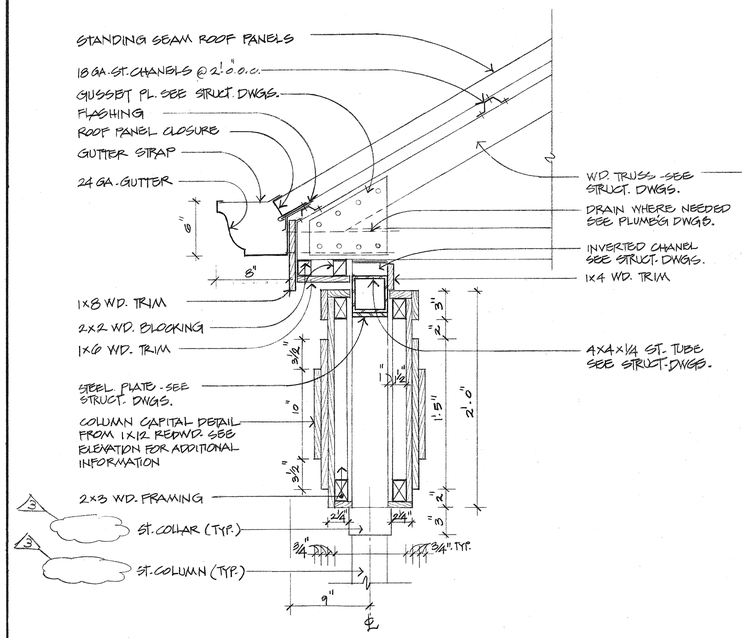
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

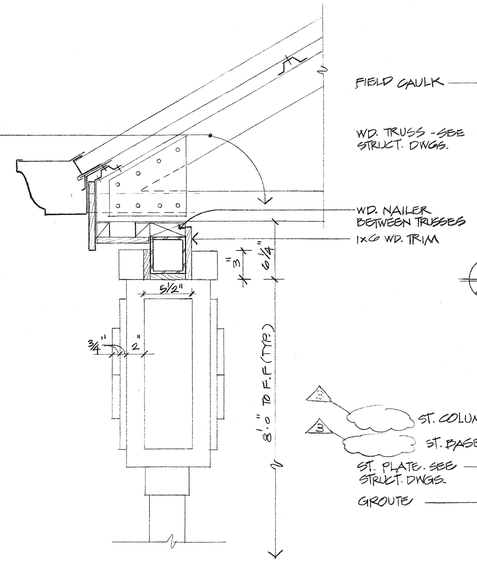
KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

CANOPY PLAN, SECTIONS & DETAILS

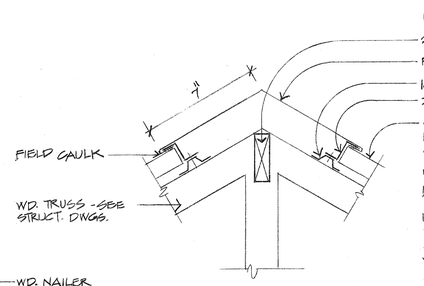
SCALE: AS NOTED
CONTRACT NO. 91-9
DRAWING NO. S-4
REV. NO. 1



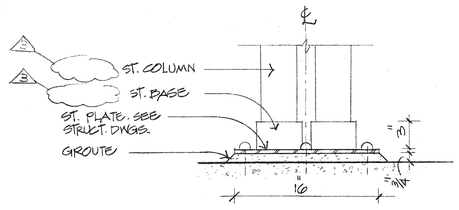
1 / A-1 DETAIL - EAVE & COLUMN CAPITAL
SCALE: 1½"=1'-0"



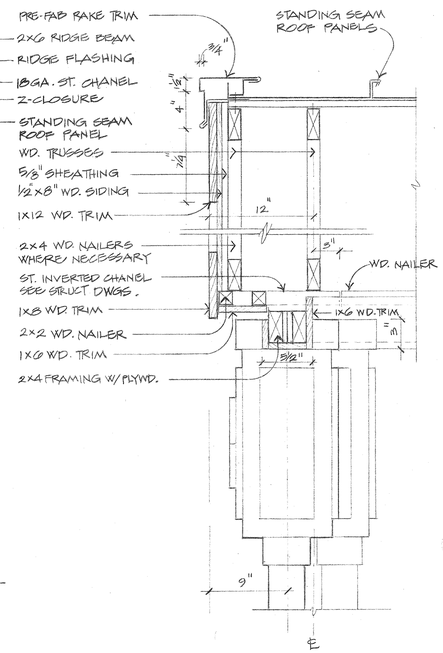
2 / A-1 SECTION THRU BEAM @ EAVE
SCALE: 1½"=1'-0"



3 / A-1 RIDGE DETAIL
SCALE: 1½"=1'-0"



4 / A-1 DETAIL - COLUM BASE
SCALE: 1½"=1'-0"



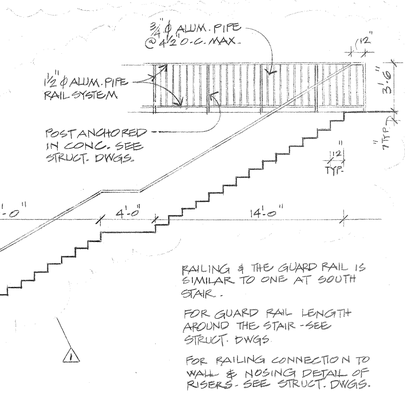
5 / A-1 DETAIL - RAKE & COL. CAPITAL @ CORNER
SCALE: 1½"=1'-0"

Sign Schedule

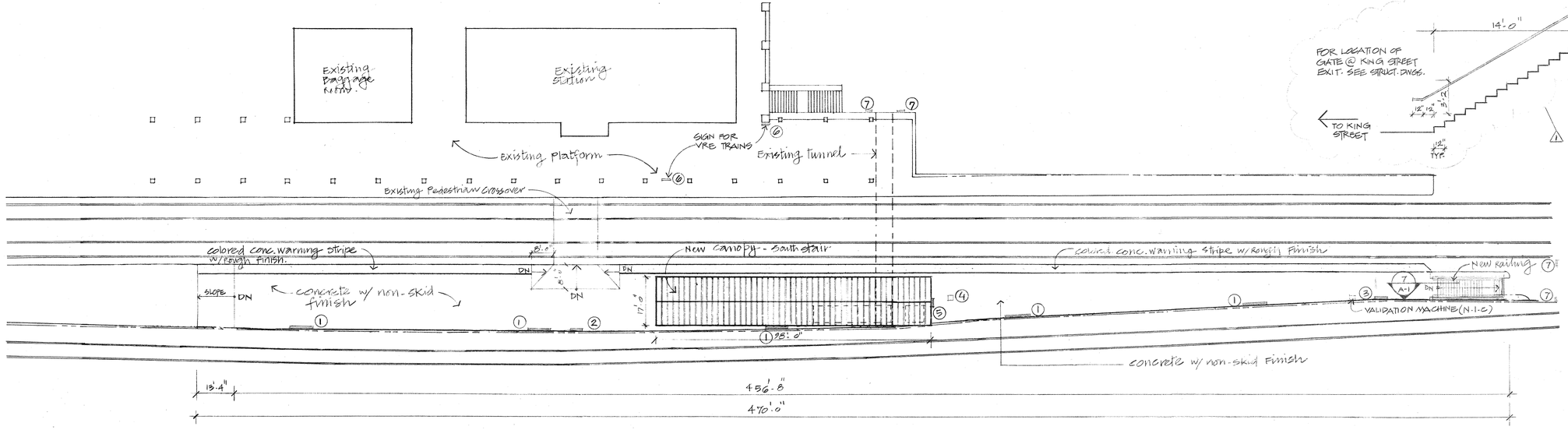
	Type	Size	Description	Quantity	Notes
1		8'x2'	Station Identification Alexandria w/Washington Arrow & Fredericksburg/ Manassas Arrow	5	Bottom of sign @ 6'-0" from F. Floor
2	14	40"x32"	Boarding Area & Ticket Validating Sign w/H/C sign	1	Bottom of sign @ 3' from F. Floor
3	14	40"x32"	Boarding Area & Ticket Validating Sign	1	Bottom of sign @ 3' from F Floor
4	10	15"x18"	Boarding H/C sign	1	
5			H/C Exit sign	1	
6			VRE Trains sign	2	
7	9	25-1/2" x 37-1/2"	Directory	4	
8	16	88"x20"	Validating sign	1	To be hung from the truss over the south stair
9	17	6'-2-1/4" x 3'-11-5/8"	information Directory	1	
10	19	22-1/2" x 37-1/2"		2	Top of sign @ 5'-8"

CODE ANALYSIS DATA

a. BUILDING CODE EDITION : 1990 BOCA
b. USE GROUP CLASSIFICATION : ASSEMBLY A3
c. TYPE OF CONSTRUCTION : 5B
d. STORY HEIGHT, FROM RIDGE TO FINISHED FLOOR: 14'.3"



7 / A-1 SECTION THRU NORTH STAIR
SCALE 3/16"=1'-0"



6 / A-1 PLAN - PLATFORM
SCALE: 1/16"=1'-0"

GENERAL NOTES:

- ALL WORK SHALL BE PERFORMED AS SHOWN ON DRAWINGS & SPECIFIED. ANY WORK FOUND TO BE NOT OF QUALITY IN MATERIAL OR PERFORMANCE AS SPECIFIED WILL BE REPLACED TO MATCH THESE DRAWINGS & SPECIFICATIONS AT THE EXPENSE OF THE CONTRACTOR, WITHOUT ANY DELAY IN THE CONSTRUCTION SCHEDULE.
- PROVIDE FLUSH FINISH CONDITIONS AT ALL CONNECTIONS WHERE NEW CONSTRUCTION ALIGNS WITH EXISTG. CONDITIONS.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS
- CONTRACTOR TO FOLLOW MANUFACTURER'S SPECIFICATIONS

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	SECTION THRU NORTH STAIR	1	M.S.	ALPHA	12.2.91
	BUILDING CODE ANALYSIS DATA	2	M.S.	ALPHA	1.2.92
	COLUMN & COLLAR DESIGNATIONS	3	M.S.	ALPHA	1.17.92

DESIGNED M.S.
DRAWN M.S.
CHECKED H.C.
APPROVED 11.22.91 DATE

alpha corporation
construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

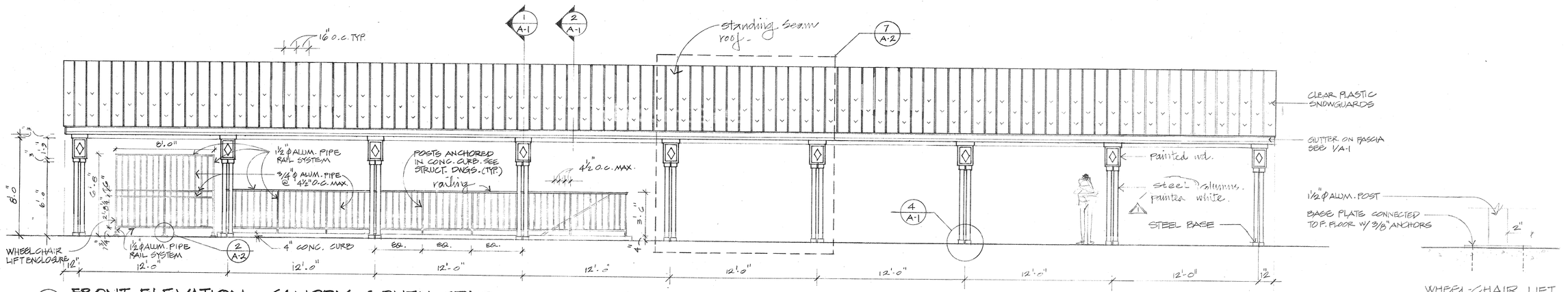
HERBERT COHEN & ASSOCIATES, CHARTERED
ARCHITECTS & PLANNERS
WASHINGTON, D.C.

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

PLATFORM PLAN, SIGNAGE SCHEDULE & ARCHITECTURAL DETAILS

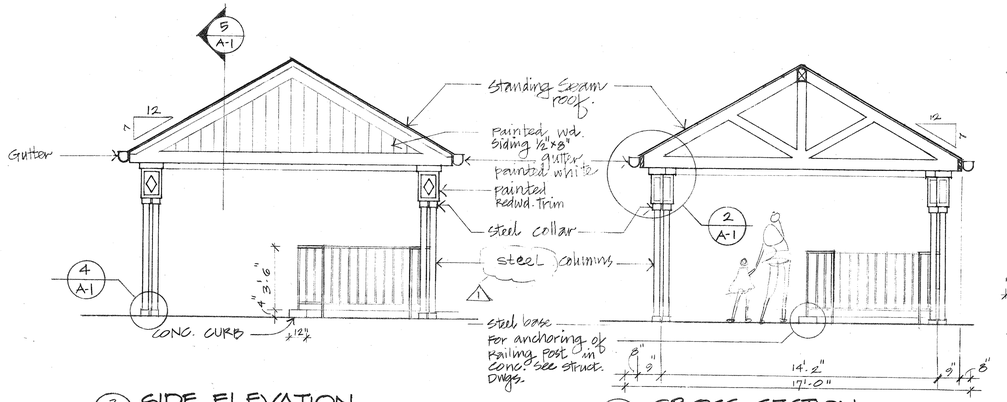
SCALE: AS SHOWN
CONTRACT NO. 91-9
DRAWING NO. A-1
REV. NO. 3



1 A-2 FRONT ELEVATION - CANOPY SOUTH STAIR
SCALE: 1/4"=1'-0"

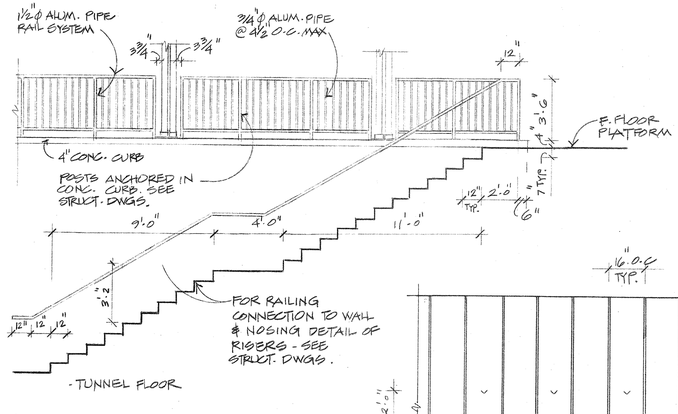


2 A-2 WHEEL-CHAIR LIFT ENCLOSURE POST
SCALE: 3"=1'-0"

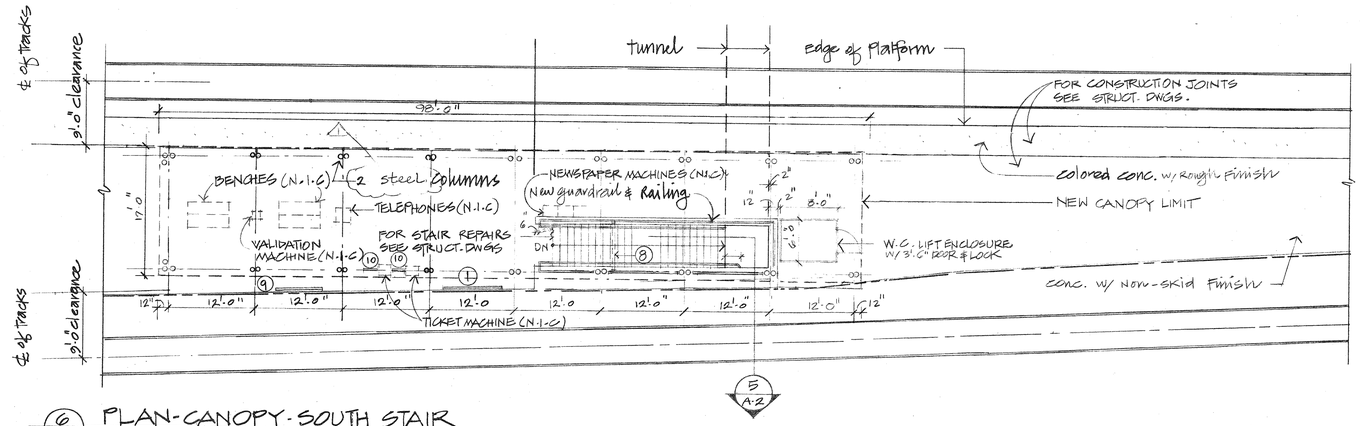


3 A-2 SIDE ELEVATION
SCALE: 1/4"=1'-0"

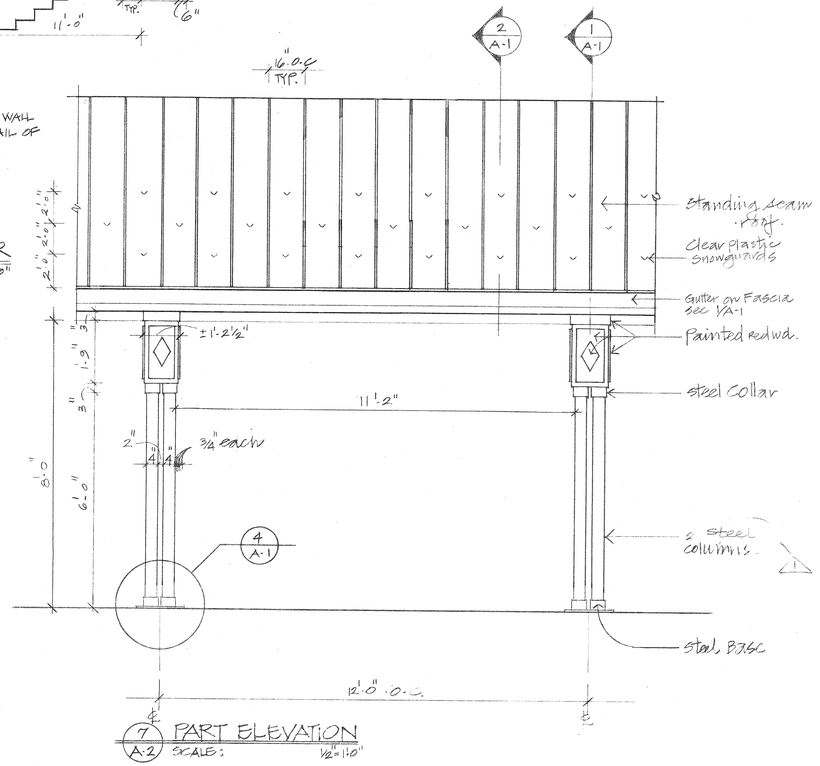
4 A-2 CROSS-SECTION



5 A-2 SECTION THRU SOUTH STAIR
SCALE: 1/4"=1'-0"



6 A-2 PLAN-CANOPY-SOUTH STAIR
SCALE: 1/16"=1'-0"



7 A-2 PART ELEVATION
SCALE: 1/2"=1'-0"

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	COLUMN DESIGNATIONS	1	MS	A.P.	1/17/92

DESIGNED M.S.
DRAWN M.S.
CHECKED H.C.
APPROVED 11.22.91 DATE

alpha corporation
construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

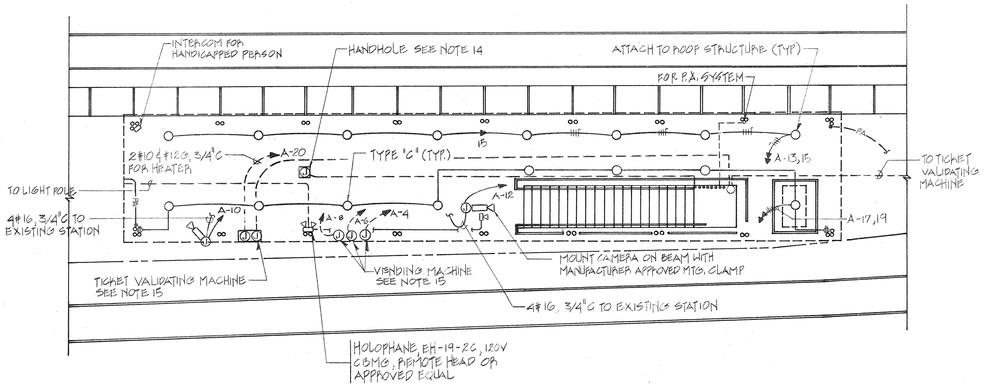
HERBERT COHEN & ASSOCIATES, CHARTERED
ARCHITECTS & PLANNERS
WASHINGTON, D.C.

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

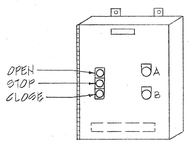
CANOPY - SOUTH STAIR
ARCH. PLAN, SECTION & ELEVATIONS

SCALE: AS SHOWN
CONTRACT NO. 91-9
DRAWING NO. A-2
REV. NO. 1



PLAN-CANOPY-SOUTH STAIR

SCALE : 1" = 10' - 0"



A. RED INDICATING LIGHT, HEAVY DUTY, OIL TIGHT, LED TYPE, WITH RED FIELD NAMEPLATE ENGRAVED "OPEN"

B. SAME AS A EXCEPT GREEN WITH BLACK FIELD NAMEPLATE ENGRAVED "CLOSE"

DOOR CONTROL PANEL - DETAIL I

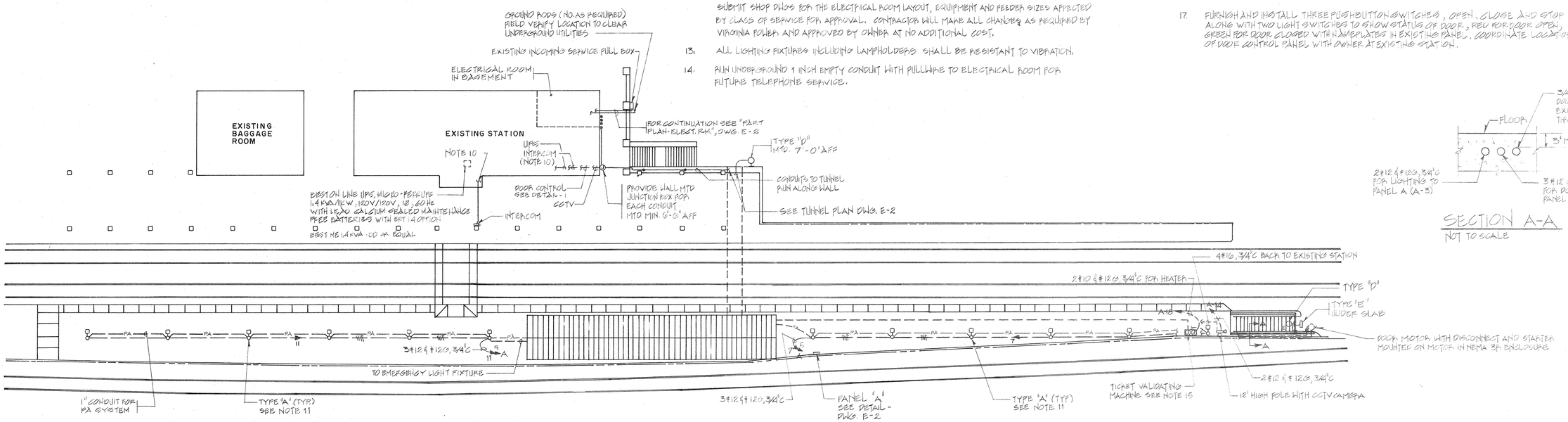
GENERAL NOTES

1. ALL WORKS SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION AND ALL GOVERNING LOCAL CODES, LAWS AND REGULATIONS.
2. SYSTEM AND EQUIPMENT GROUNDING CONTINUITY SHALL BE ASSURED AS REQUIRED BY APPLICABLE SECTIONS OF N.E.C.
3. ALL WIRING SHALL BE COPPER TYPE "THWN" OR BETTER. MINIMUM WIRING SIZE SHALL BE #12 AWG COPPER, MINIMUM CONDUIT SIZE SHALL BE 3/4".
4. ALL CIRCUIT PROTECTIVE DEVICES SHALL HAVE THE REQUIRED RATING AND INTERRUPTION CAPACITY EQUAL TO OR GREATER THAN THE AVAILABLE SHORT-CIRCUIT CURRENT AT ITS SUPPLY TERMINAL: MINIMUM INTERRUPTING CAPACITY SHALL BE 10,000 AMPS, SYMMETRICAL A.I.C.
5. GENERAL CONTRACTOR SHALL IN A WORKMANLIKE MANNER, PROVIDE A COMPLETE, OPERABLE SYSTEM; DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM.
6. DRAWINGS ARE ONLY DIAGRAMMATIC IN NATURE, GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION, GENERAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER DIVISION TRADES. LOCATE FIXTURES, DEVICES, ETC. IN ORDER TO AVOID INTERFERENCES. ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO BEAMS AND WALLS IN AT LEAST CONSPICUOUS MANNER.
7. ARCHITECTURAL FEATURES SHOWN ON THESE DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ACTUAL BUILDING CONSTRUCTION OF WALLS AND CURBS.
8. ALL FEEDERS AND BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR INCLUDED WITH PHASE WIRING.
9. ALL CONDUIT RUNS CROSSING EXPANSION/DEFLECTION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS AS REQUIRED.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF CCTV EQUIPMENT, DOOR CONTROL STATION AND MASTER INTERCOM INSIDE THE EXISTING STATION WITH THE OWNER.
11. SEE STRUCTURAL DWGS. FOR ANCHOR BOLT INSTALLATION.
12. THE CLASS OF SERVICE IS TO BE APPROVED BY VIRGINIA POWER. THE CONTRACTOR WILL SUBMIT SHOP DWGS FOR THE ELECTRICAL ROOM LAYOUT, EQUIPMENT AND FEEDER SIZES AFFECTED BY CLASS OF SERVICE FOR APPROVAL. CONTRACTOR WILL MAKE ALL CHANGES AS REQUIRED BY VIRGINIA POWER AND APPROVED BY OWNER AT NO ADDITIONAL COST.
13. ALL LIGHTING FIXTURES INCLUDING LAMPHOLDERS SHALL BE RESISTANT TO VIBRATION.
14. RUN UNDERGROUND 1 INCH EMPTY CONDUIT WITH PULLWIRE TO ELECTRICAL ROOM FOR FUTURE TELEPHONE SERVICE.

SYMBOL LIST

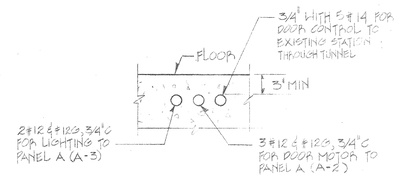
- WALL MOUNTED LIGHTING FIXTURE.
- INCANDESCESCENT LIGHTING FIXTURE SURFACE OR SUSPENDED FROM CEILING.
- 1' x 4' FLUORESCENT LIGHTING FIXTURE.
- LIGHT POLE
- WEATHERPROOF, GFI DUPLEX RECEPTACLE, PEDESTAL MOUNT, 18" AFF.
- JUNCTION BOX.
- MOTOR CONNECTION.
- DISCONNECT SWITCH.
- PANELBOARD, 120/208V, 3Ø, 4W, 100 AMP
- CONDUIT RUN UNDER FLOOR, MINIMUM 3" CONCRETE COVER.
- CONDUIT RUN EXPOSED.
- CONDUIT GOING UP.
- CONDUIT GOING DOWN.
- HOMERUN TO PANELBOARD; ARROWS DENOTE NUMBER OF CIRCUITS, NUMERALS DENOTE CIRCUIT NUMBERS, LETTER DENOTES DESIGNATED PANELBOARD AND HASHMARKS DENOTE NUMBER OF WIRES WHEN MORE THAN THREE (PHASE, NEUTRAL AND GROUND).
- 1" EMPTY CONDUIT WITH PULL WIRE FOR TELEPHONE
- CCTV CAMERA WITH JUNCTION BOX. 1" CONDUIT WITH #16 WIRES (AS REQUIRED BY MANUFACTURER) BACK TO EXISTING STATION
- 1" EMPTY CONDUIT WITH PULL WIRE FOR PA SYSTEM.
- EMERGENCY LIGHT FIXTURE WITH BATTERY PACK.

15. VENDING MACHINES AND TICKET VALIDATORS ARE FURNISHED AND INSTALLED BY NVTC. PROVIDE 2#10 & #10G IN 3/4"C BS TO EACH VENDING MACHINE AND TICKET VALIDATOR STUBBED UP AND TERMINATED IN 4" SQUARE JUNCTION BOX WITHIN EQUIPMENT ENCLOSURE FOR HARD CONNECTION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. COORDINATE WITH NVTC FOR TYPE OF EQUIPMENT PROVIDED. FOR EXACT LOCATION OF EQUIPMENT REFER TO ARCHITECTURAL DRAWINGS.
16. ALL CONDUITS IN CANOPY SHALL BE RUN ALONG BEAMS.
17. FURNISH AND INSTALL THREE PUSHBUTTON SWITCHES, OPEN, CLOSE AND STOP ALONG WITH TWO LIGHT SWITCHES TO SHOW STATUS OF DOOR, RED FOR DOOR OPEN, GREEN FOR DOOR CLOSED WITH NAMEPLATES IN EXISTING PANEL. COORDINATE LOCATION OF DOOR CONTROL PANEL WITH OWNER AT EXISTING STATION.



STATION PLAN

SCALE : 1" = 20' - 0"



SECTION A-A

NOT TO SCALE

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	CONTR. No.	1	BSS	JJC	1/17/92

B.S.S. DESIGNED 11/14/91
D.P. DRAWN 11/14/91
P.M. CHECKED 11/14/91
J.J.C. APPROVED 11/14/91
DATE

alpha corporation
construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

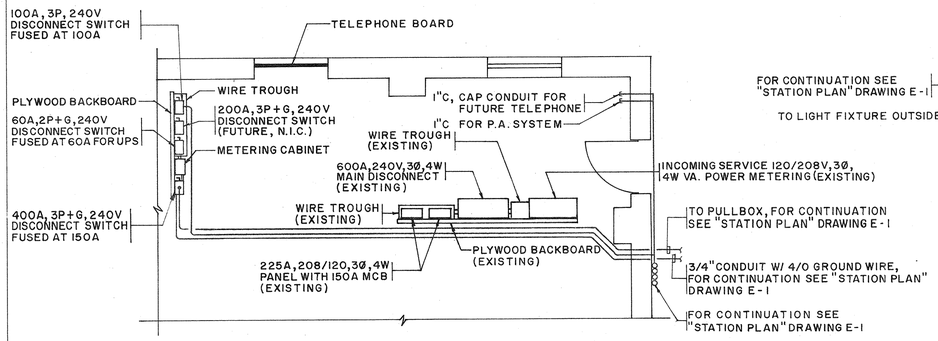
JOHN J. CHRISTIE & ASSOCIATES, P.C.
CONSULTING ENGINEERS
WASHINGTON, D.C.

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

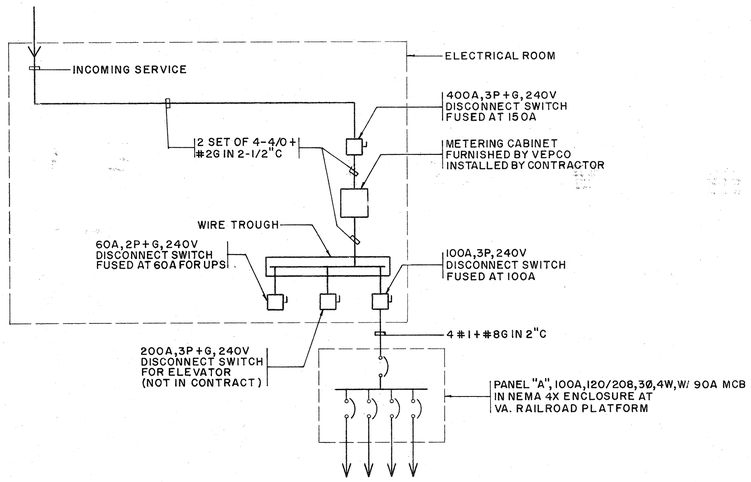
STA. PLAN, GENERAL NOTES, SYMBOL LIST - ELECTRICAL PLAN - CANOPY - SOUTH STAIR

SCALE: AS SHOWN
CONTRACT: 91-9
DRAWING NO.: E-1
REV. NO.: 1



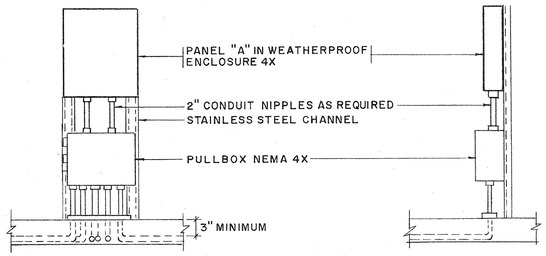
PART PLAN - ELECTRICAL ROOM

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



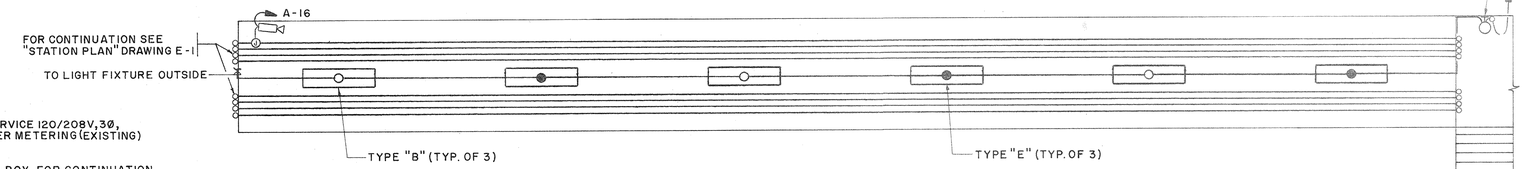
SINGLE LINE DIAGRAM

NOT TO SCALE



PANELBOARD MOUNTING DETAIL

NOT TO SCALE



TUNNEL PLAN

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

VOLTS 120/208V, 3Ø, 4W — PANEL "A" — FEED 4#1+#8G IN 2"C
BUS 100A — MTG. SURFACE
MAIN 30ST/100AF — LOC. ELECTRICAL ROOM

CKT NO.	SERVING	C.B TRIP	C.B FRAME	COND SIZE	CONDUCTOR SIZE	LOAD PH.A	LOAD PH.B	LOAD PH.C	CB	CB	LOAD PH.A	LOAD PH.B	LOAD PH.C	CONDUCTOR SIZE	COND SIZE	C.B FRAME	C.B TRIP	SERVING	CKT NO
1	TUNNEL LIG.	20	100	3/4	3#12	1.3			A		0.7			4#12	3/4	100	20	DOOR MOTOR	2
3	LIGHTING						0.3		B			0.7							4
5								1.1	C				0.7						6
7						1.0					2.0			3#10	3/4	100	30	VENDING MACH.	8
9							1.0					2.0						VENDING MACH.	10
11								1.0					2.0					VENDING MACH.	12
13						1.2					0.1			3#12			20	SECURITY CAMERA	14
15							1.2					0.1							16
17								1.2					0.1						18
19						1.2					0.1								20
21	SPARE											2.0		3#10	3/4	100	30	TICKET VALID. MACH	22
23	SPACE												2.0	3#10	3/4	100	30	TICKET VALID. MACH	24
25																100	20	SPARE	26
27																			28
29																			30
SUBTOTAL LOAD PER PHASE						4.7	2.5	3.2			2.9	4.8	4.8	SUBTOTAL LOAD PER PHASE					
TOTAL LOAD PER PHASE						7.6	7.3	8.1											

_____ AMPS A.I.C. 22,000

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	LAMP NO.	LAMP TYPE	VOLT.	MOUNTING	REMARKS
A	HADCO	V15AR3N250WHPS 120V	1	250WHPS	120	P-1320 10A POLE	ROOF MTD. OPTICAL ASSEMBLY W/ HORIZ. MTD. LAMP
B	DAY-BRITE	TVR2-4WH	2	F40 R.S.	120	SURFACE	LOW TEMP. BALLAST
C	ABOLITE	RD300G1160GBSG600	1	175H.M.H.	120	PENDANT	8' AFF
D	HADCO	V15AR3N150WHPS 120V	1	150W HPS	120	WALL	W/ WALL BRACKET MOUNT
E	DAYBRITE	ETVR2-4WH	2	F40R.S.	120	SURFACE	LOW TEMP. BALLAST AND WITH DBB-TA

REVISIONS

NO	DESCRIPTION	BY	APP	DATE
	CONTR NO.			
1		BSS	JJC	11/7/91

DESIGNED	B.S.S.	11/14/91
DRAWN	R.P.T.	11/14/91
CHECKED	P.M.	11/14/91
APPROVED	J.J.C.	11/14/91 DATE

alpha corporation construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

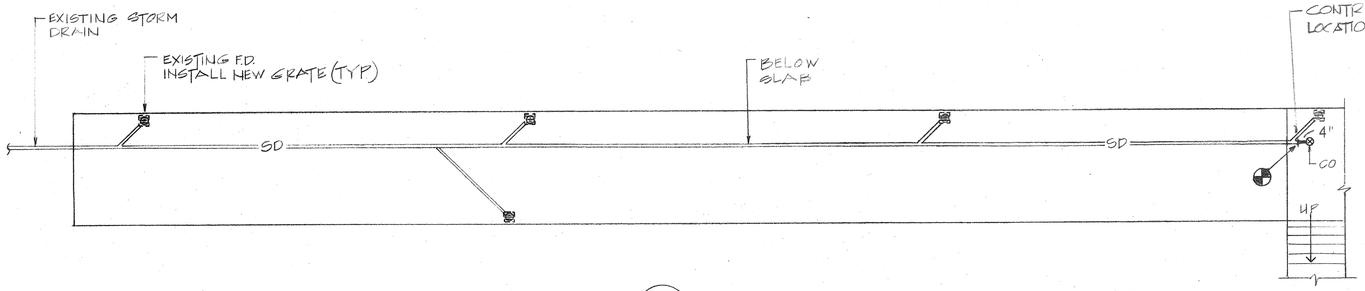
JOHN J. CHRISTIE & ASSOCIATES, P.C.
CONSULTING ENGINEERS
WASHINGTON, D.C.

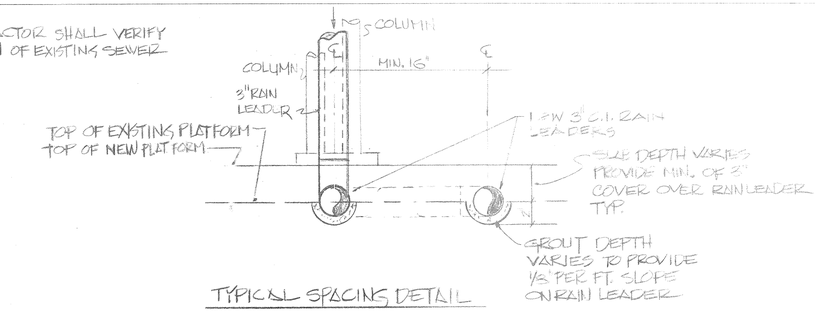
VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION

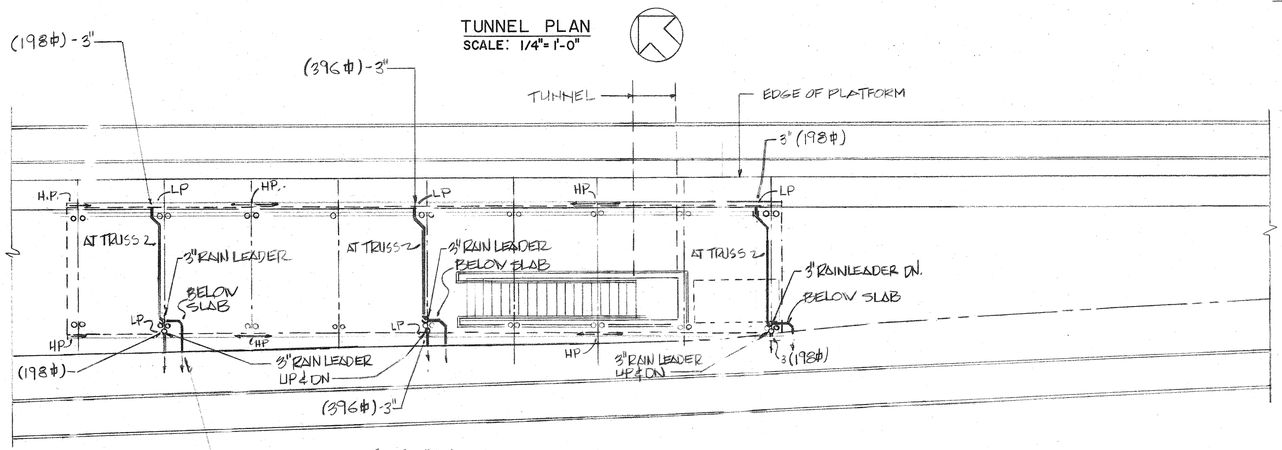
PART PLAN - ELECTRICAL ROOM, SINGLE LINE DIAGRAM, TUNNEL PLAN, LIGHTING FIXTURE & PANELBOARD SCHEDULES

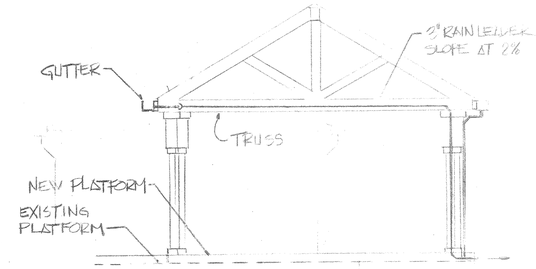
SCALE: AS SHOWN
CONTRACT NO. C1-9
DRAWING NO. E-2
REV. NO. 1



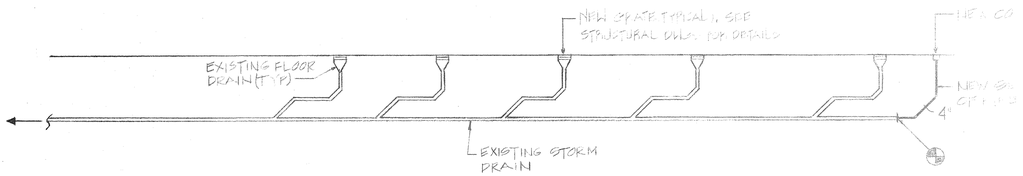


TYPICAL SPACING DETAIL
NO SCALE

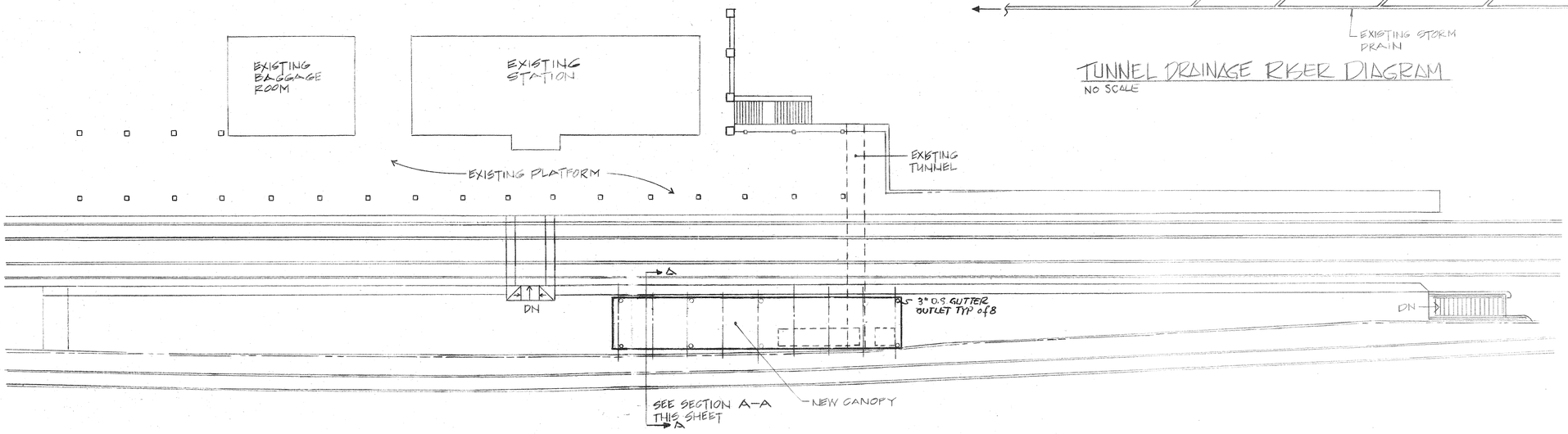




SECTION A-A
NO SCALE



TUNNEL DRAINAGE RISER DIAGRAM
NO SCALE



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

REVISIONS	DESCRIPTION	NO	BY	APP	DATE
	CONTR. NO	1	PM	JJC	1/17/92

DESIGNED	RGH	11-14-91
DRAWN	OD	11-14-91
CHECKED	PM	11-14-91
APPROVED	JJC	11-14-91
		DATE

alpha corporation
construction & engineering
45665 Willow Pond Plaza
Sterling, VA 22170
703/709-2206

JOHN J CHRISTIE & ASSOCIATES, P.C.
CONSULTING ENGINEERS
WASHINGTON, D.C.

VIRGINIA RAILWAY EXPRESS
NVTC / PRTC
ARLINGTON, VIRGINIA

KING STREET COMMUTER RAIL STATION
PLATFORM RENOVATION
PLATFORM, CANOPY AND TUNNEL PLUMBING PLAN
DETAIL & SECTIONS

SCALE: AS SHOWN
CONTRACT NO. 91-3
DRAWING NO. P-1
REV. NO. 1

13 of 13

ATTACHMENT L.4

Record Drawings

1995
Renovation/Rehabilitation of Alexandria Union Station

CITY OF ALEXANDRIA, VIRGINIA

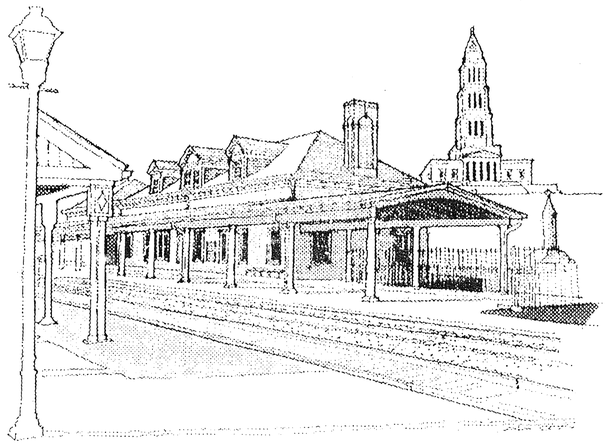
DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

GENERAL SPECIFICATIONS

THE LOCATION OF ALL EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE NECESSARY UTILITY COMPANIES FOR LOCATION AND/OR ADJUSTMENT OF SAME.

CONTRACT CONSTRUCTION DRAWINGS

RENOVATION/REHABILITATION OF ALEXANDRIA UNION STATION
(PROJECT # EN 93-100-V14, PE 101, PE 102, C 501)



VIRGINIA DEPARTMENT OF TRANSPORTATION	
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION	
DATE	LOCATION AND DESIGN ENGINEER
DATE	DIRECTOR OF ENGINEERING
DATE	DIRECTOR OF PROGRAMMING AND PLANNING
DATE	DEPUTY COMMISSIONER AND CHIEF ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION	
DATE	COMMISSIONER

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
9-15-95 DATE	M.S. Hollis URBAN ENGINEER
9/11/95 DATE	LOCATION AND DESIGN ENGINEER
DATE	
DATE	DIRECTOR OF PROGRAMMING AND PLANNING

APPROVED FOR CONSTRUCTION	
10/19/95 DATE	DEPUTY COMMISSIONER AND CHIEF ENGINEER

APPROVED	
DATE	DIVISION ENGINEER FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

CITY OF ALEXANDRIA, VIRGINIA	
10/19/95 DATE	DIRECTOR OF TRANSPORTATION & ENVIRONMENTAL SERVICES

FED. PROJ. TEA-5401(290)
PROJ.-EN93-100-V14, C-501

ALX_105.1_STA_SET_1993_N/A

ARCHITECTURAL ABBREVIATIONS

above	ABV	dampproofing	DMPF	glazed structural tile	GST	obscure	OBSC	soffit	SOF
abv finish floor	AFF	Data Processing	D/PRC	grab bar	GB	office	OFF	solid core	SC
abv finish grade	AFG	dead load	DL	grade	GR	on center	OC	South	S
access	ACC	deck drain	DD	grating	GRTG	opening	OPG	sound retardant	SRT
access flooring	ACFL	degree	DEG	guard	GD	operator	OPR	speaker	SPKR
access panel	AP	demolish (tion)	DEMOL	gypsum	GYP	opposite	OPP	specification(s)	SPEC
acoustical	AC	Department	DEPT	gypsum wall board	GWB	ounce	OZ	sprinkler head	SPH
acoust. panel	ACP	Dept of Transportation	DOT			outside air	O/A	square	SQ
acoust. tile	ACT	depressed	DEPR			outside diameter	OD	square feet	SQFT
acrylic plastic	ACR	depth	D	handicap(ped)	H/C	overall	OA	stainless steel	SS
addendum	ADD	detail	DET	hardware	HDW	overhead	OH	stair	ST
adhesive	ADH	diagonal	DIAG	hardwood	HDWD			standard	STD
adjacent	ADJ	diameter	DIAM	head	HD			station	STA
adjustable	ADJST	dimension	DIM	header	HDR	paint	PT	steel	STL
aggregate	AGGR	director	DIR	heater	HTR	painted	PTD	steel tube	TS
air conditioning	A/C	disconnect	DISC	heating	HTG	pair	PR	storage	STOR
A/C unit	ACU	dishwasher	DW	Htg Ventiltg & A/C	HVAC	panel	PNL	storm drain	SD
air handling unit	AHU	division	DIV	height	HT	partition	PTN	structural	STR
alternate	ALT	door	DR	high	H	pavement	PVT	superintendent	SUPT
aluminum	AL/ALUM	double	DBL	high point	HPT	perforated	PERF	supply air	S/A
anchor bolt	AB	double acting	DA	hollow core	HC	perpendicular	PERP	supply grille	S/G
approximate(ly)	APPROX	double hung	DH	hollow metal	HM	plaster	PLAS/PL	supply register	S/R
Architect	ARCH	dowel	DWL	horizontal	HOR	plastic laminate	P/LAM	support(ed)(ing)	SUPP
Architect/Engineer	A/E	down	DN	horsepower	HP	plate	PL	suspended	SUSP
area drain	AD	downspout	DS	hose bibb	HB	platform	PLATF	switch	SW
asphalt	ASPH	drain	D	hot water	HW	plywood	PLYWD	switchboard	SWBD
asph conc paving	ACPV	drawer	DWR	hot water return	HWR	plumbing	PLBG	symmetrical	SYM
attenuation	ATTN	drawing	DWG	hot water supply	HWS	pneumatic	PNEU	synthetic	SYN
audio/visual	A/V	drinking fountain	DF	hour	HR	polished	POL	system	SYS
automatic	AUTO	dumbwaiter	DWTR			polyvinylchloride	PVC		
average	AVG					pound(s)	LB		
		each	EA	inch(es)	IN	pounds per cu ft	PCF	tackboard	TBD
back to back	B/B	East	E	incinerator	INCN	pounds per in ft	PLF	telephone	TEL
basement	BSMT	elastomer polymer		include(ing)	INCL	pounds per sq ft	PSF	television	TV
beam	BM	diene monomer	EPDM	inside diameter	ID	pounds per sq in	PSI	tempered	TMPD
Bedroom	BR	electric(al)	ELEC	insulate(ed)(ion)	INSUL	precast	PCST	temporary	TEMP
below	BEL	elec water cooler	EWC	interior	INT	prefabricated	PFAB	terne -coated	
between	BET	elec water heater	EWH	invert	INV	premolded	PMLD	stainless steel	TCS
beveled	BEV	electrical closet	EC			preserv trtd wood	PTWD	terrazzo	TZ
blocking	BLKG	elect panelboard	EPNL			projected	PROJ	thermostat	TSTAT
beaded board	BDBD	elevation	EL			proposed	PROP	test bore	TB
board	BD	elevator	ELEV	Janitor's Closet	JAN CL	protection (protected)	PROT	thick(ness)	THK
both sides	BS	emergency	EMER	joint	JT./JNT.			threshold	THR
both ways	BW	enclose(ure)	ENCL	joist	JST	pull box	PBOX	through	THRU
bottom	BOT	Engineer	ENGR	junction box	JB	pushbutton	PBUT	tile	TL
bracket	BKT	entrance	ENTR					toilet paper disp	TPD
Brick	BR	equal	EQ			quarry tile	QTL	toilet partition	TPT
Brit Thermal Unit	BTU	equipment	EQPT	kickplate	KPL			tolerance	TOL
building	BLDG	exhaust	EXH	kitchen	KIT			tongue and groove	T&G
bullnose	BN	existing	EXIST/EX	knock-out	KO			top and bottom	T&B
		expansion	EXPN			radiator	RAD	top of	TO
		expansion joint	EJ			radius	R	top of concrete	TOC
		expansion joint cover	EJC	label	LBL	rainwater conductor	RWC	top of curb	TC/TOC
cabinet	CAB	exposed	EXPO	laboratory	LAB	Reception	RCPT	top of gutter	TG
cab unit heater	CUH	exterior	EXT	laminated	LAM	receptor	REC	top of joist	TOJ
carpet	CPT	extruded	EXTR	lavatory	LAV	recess(ed)	RCS	top of slab	TOSL
cased opening	C/O			lead coated	LC	reference	REF(RE:)	top of steel	TOS
casement	CSMT	fabric	FAB	lead lined	LDL	reflected	REFL	top of pavement	TP
casework	CSWK	fabric wall covering	FWC	lefthand	LH	refrigerator	REFR	top of parapet	TOP
casing bead	CBD	face of	FO	left hand reverse	LHR	reinforce(d)(ing)	REINF	top of wall	TW
cast iron	CI	face of concrete	FOC	length	L	remove(able)	REM	towel bar	TBAR
catch basin	CB	face of masonry	FOM	library	LIBR	required	REQ	towel dispenser	TD
ceiling	CLG	face of studs	FOS	light	LT	resilient	RESIL	towel disp/recept	TD/R
cement	CEM	fan coil unit	FCU	lighting	LTG	resilient base.	RB	transparent finish	TF
center	CEN	finish(ed)	FIN	lightweight	LTWT	resilient tile	RT	tread	T
center line	CL	finish grade	FIN GD	lineal	LIN	return	RET	treated	TRT'D
center to center	C/C	fire alarm	FA	live load	LL	return air	R/A	typical	TYP
centimeter	CM	fire damper	F/D	locker	LKR	return grille	RG		
ceramic	CER	fire extinguisher	FE	louver	LVR	revision (revised)	REV	Underwriter's Lab	UL
ceramic tile	CT	fire exting cab	FEC	low point	LPT	revolutions per min	RPM	unexcavated	UNEX
ceramic mosaic tile	CMT	fire hose cabinet	FHC			right	RT	unfinished	UNFN
chain link fence	CLF	fire hose rack	FHR			right hand	RH	unit heater	UH
chalkboard	CHBD	fire hose station	FHS	machine	MACH	right hand reverse	RHR	unless otherwise noted	UON
chilled water return	CHWR	fire hydrant	FH	manhole	MH	riser	R	urinal	UR
chilled water supply	CHWS	fireproofing	FRPRF	manufacturer	MFGR	roof	RF	Utility	UTIL
cleanout	CO	fire-resist coating	FRC	masonry	MAS	roofing	RFG		
closet	CLOS	fire retartant	FRT	masonry opening	MO	roof drain	RD	vapor barrier	VB
closure	CLS	fixture	FIXT	material	MATL	roof top unit	RTU	vapor retarder	VAP RET
cold water	CW	flashing	FLASH	maximum	MAX	room	RM	varies	VAR
column	COL	flexible sheet roof	FSR	mechanical	MECH	rough opening	RO	vent	V
combination	COMB	floor	FL	medicine cabinet	MC	rubber	RUB	vent thru roof	VTR
common	COM	floor drain	FD	metal	MTL			verify in field	VIF
composition	CMPO	floor sink	FSK	metal lath	ML			vertical	VERT
compressible	CMPR	fluorescent	FLUR	meter	M			Vestibule	VEST
concrete	CONC	foot/feet	FT	mezzanine	MEZZ	sanitary	SAN	vinyl composition tile	VCT
conc masonry unit	CMU	footing	FTG	millimeter	MM	san napkin dispenser	SND	vinyl tile	VTL
conductive floor	CDFL	foundation	FNDN	minimum	MIN	san napkin recept	SNR	vinyl wall covering	VWC
Conference	CONF	frame	FR	mirror	MIR	schedule	SCHED	volume	VOL
connection	CONN	freezer	FRZR	modified	MOD	sealant	SLNT		
construction	CONST	fresh air	F/A	molding	MLDG	seating	STNG		
continuous	CONT	full size	FS	mount(ed)(ing)	MT	Secretary	SCTY	wainscot	WSCT
Contractor	CONTR	furred(ing)	FUR	mullion	MUL	section	SECT	water closet	WC
control joint	CJ					service(s)	SERV	water heater	WH
copper	COP	gauge	GA			service sink	SSK	water resistant	WR
corner guard	CG	gallon	GAL	natural	NAT	sheathing	SHTH	waterproof(ing)(ed)	WP
corridor	CORR	galvanized	GALV	noise reduct coeff	NRC	sheet	SHT	weight	WT
corrugated	CRGT	gas	G	nominal	NOM	shelf	SHL	welded wire fabric	WWF
countersunk	CSK	general	GEN	North	N	shower	SHWR	west	W
course	CS	glass	GL	not in Contract	NIC	similar	SIM	wide(th)	W
cubic feet	CUFT	glass block	GL BLK	not to scale	NTS	sleeve	SLV	window	WDW
cuft per minute	CFM	glass fiber		number	NO	sliding	SLID	wire glass	WGL
cuft per second	CFS	reinforced concrete	GFRC			smoke detector	S/D	wire mesh	WM
cubic yard	CUYD	glazed CMU	GL CMU			soap dispenser	SDS	with	W/
cubicle curtain track	CCT							without	W/O
curb and gutter	C&G							work	WK

NOTE: NOT ALL ABBREVIATIONS ARE USED IN CONSTRUCTION DOCUMENTS.

GENERAL SCOPE OF ARCHITECTURAL WORK NOTES:

THIS LIST OF GENERAL SCOPE NOTES IS INTENDED ONLY AS A CONVENIENCE FOR THE CONTRACTOR. IN GENERAL TERMS, THE WORK OF THIS CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

1. REMOVE EXISTING PLASTER AND GMB PARTITIONS AS INDICATED ON DRAWINGS. PATCH AND REPAIR WALL AND FLOOR AREAS DAMAGED BY DEMOLITION TO MATCH ADJACENT EXISTING SURFACES.

2. REMOVE EXISTING PLUMBING FIXTURES AS INDICATED ON DRAWINGS. PATCH AND REPAIR WALL AND FLOOR AREAS DAMAGED BY DEMOLITION TO MATCH ADJACENT EXISTING SURFACES.

3. REMOVE TOILET PARTITIONS AS INDICATED ON DRAWINGS. PATCH AND REPAIR WALL AND FLOOR AREAS DAMAGED BY DEMOLITION TO MATCH ADJACENT EXISTING SURFACES. SALVAGE ALL MARBLE TOILET PARTITIONS FOR REUSE. REMARK SALVAGED MARBLE AND USE TO REPAIR DAMAGED OR MISSING MARBLE AT EXISTING WINDOW SILLS AND TO REPLACE THE PLASTIC LAMINATE SILL/COUNTERS AT THREE TICKET SALES WINDOWS. DETAILING TO MATCH EXISTING DETAILING AT WINDOW SILLS.

4. REMOVE EXISTING EQUIPMENT/CABINETRY AS INDICATED ON DRAWINGS. PATCH AND REPAIR WALL AND FLOOR AREAS DAMAGED BY DEMOLITION TO MATCH ADJACENT EXISTING SURFACES. TURN OVER EQUIPMENT INDICATED FOR SALVAGE TO OWNER.

5. REMOVE EXISTING PLASTER AND HOMOSOTE CEILINGS AND ASSOCIATED STRUCTURE. PATCH AND REFINISH DAMAGED AREAS OF MOULDED BRICK CORNICE TO MATCH EXISTING, UNDAMAGED SECTIONS. CLEAN AND PATCH REPAIR EXISTING WOOD CEILING AND TRUSSES AS INDICATED ON DRAWINGS.

6. EXISTING SETTEE AND RADIATOR BANKS TO REMAIN. RADIATORS TO BE COMPLETELY RE-PIPED AND CLEANED PER HVAC SPECIFICATIONS.

7. SALVAGE EXISTING SETTEES AS INDICATED AND MODIFY TO MATCH EXISTING SETTEES IN MAIN WAITING AREA. ALL EXISTING SETTEES TO BE STRIPPED OF EXISTING PAINT AND REFINISHED.

8. INSTALL NEW INTERIOR GMB PARTITIONS AS INDICATED ON DRAWINGS AND PATCH EXISTING PARTITIONS AND WALLS.

9. REPAIR/PATCH DAMAGED AREAS OF CERAMIC TILE FLOORING WITH NEW TILES TO MATCH EXISTING. INSTALL NEW 1" HEXAGONAL MOSAIC CERAMIC TILE TO MATCH EXISTING AT NEW TOILET ROOMS.

10. REPAIR TO MATCH EXISTING CERAMIC MOSAIC TILE FLOORING AT AREAS OF DEMOLITION WITH NEW TILES TO REPLICATE EXISTING GREEK "KEY" PATTERN.

11. REMOVE EXISTING WINDOW SASHES INDICATED ON DRAWINGS FROM EXISTING FRAMES, TAKING CARE NOT TO DAMAGE SASH OR FRAMES. SALVAGE SASH AND TURN OVER TO OWNER. SAW CUT EXISTING MASONRY WALL BELOW EXISTING FRAMED OPENINGS TO CREATE NEW OPENINGS FOR DOORWAYS AS SHOWN ON THE DRAWINGS. FRAME OUT NEW MASONRY OPENINGS WITH NEW WOOD FRAME AND TRIM TO MATCH ORIGINAL PROFILE. NEW DOOR TO BE SOLID WOOD WITH GLASS LIGHTS TO MATCH EXISTING EXTERIOR DOORS. SALVAGE ALL MASONRY FOR REUSE.

12. SAW CUT AND REMOVE EXISTING CONCRETE SLAB AS INDICATED ON DRAWINGS AND INSTALL NEW RADIANT SLAB.

13. PROVIDE NEW STRUCTURAL GLASS WALL AND DOOR ASSEMBLY AT EXISTING OPENINGS AT EAST AND WEST SIDE OF BREEZEWAY.

14. PREPARE ALL NEW AND EXISTING INTERIOR AND EXTERIOR WOOD SURFACES FOR REFINISHING AND REPAINTING. WORK TO INCLUDE 35 WINDOW ASSEMBLIES AND 9 DOOR ASSEMBLIES AT THE FIRST FLOOR LEVEL (BOTH BUILDINGS), 7 DORMER UNITS AT ROOF LEVEL OF THE MAIN STATION BUILDING, 3 WINDOW ASSEMBLIES AND 1 DOOR ASSEMBLY A THE EXPOSED BASEMENT LEVEL, AND 4 EYEBROW DORMER LOUVER UNITS AT THE BAGGAGE BUILDING ROOF. PREPARE AND PAINT/REPAINT ALL NEW AND EXISTING PARTITION AND WALL SURFACES INCLUDING ALL TRIM AND ORNAMENTATION.

15. ALONG THE NORTH AND WEST SIDE OF THE STATION BUILDING, INSTALL NEW TERNE-COATED STAINLESS STEEL STANDING SEAM ROOF ON NEW PORCH CANOPY. NEW ALL-METAL ROOF DETAILS TO MATCH EXITING A EAST SIDE OF BUILDING.

16. MODIFY EXISTING METAL GUARDRAIL AND INSTALL BETWEEN NEW WOOD COLUMNS ON NORTH AND WEST FACE OF STATION BUILDING. INSTALL NEW STAINLESS STEEL HAND RAIL AT NORTH STEPS AS SHOWN ON DRAWINGS.

17. PATCH POINT EXISTING BRICK MASONRY TO MATCH EXISTING POINTING FOR COLOR AND TEXTURE. (APPROXIMATELY 800 LF OF REPOINTING REQUIRED.)

18. CLEAN EXTERIOR MASONRY IN BREEZEWAY THOROUGHLY PRIOR TO ENCLOSING SPACE WITH GLASS WALL AND ENTRANCE ASSEMBLIES.

19. REMOVE EXISTING ASPHALT SHINGLES AND FELT UNDERLAYMENT AT DORMER CHEEKS AND REPLACE WITH NEW UNDERLAYMENT AND BUCKINGHAM SLATE SHINGLES TO MATCH SAMPLES PROVIDED BY OWNER (APPROXIMATELY 400 SF AT 7 DORMERS). SPOT REPAIR/REPLACE IN-KIND ASPHALT SHINGLES ON ROOFS AS REQUIRED (APPROXIMATELY 150 SF).

20. INSTALL NEW PLUMBING FIXTURES AND ALL TOILET ACCESSORIES NECESSARY FOR TOILET ROOM FACILITIES TO MEET ADA REQUIREMENTS.

21. INSTALL NEW STAINLESS STEEL TOILET PARTITIONS AS INDICATED ON DRAWINGS AND AS REQUIRED TO MEET ADA REQUIREMENTS.

22. CONSTRUCT NEW 8" CMU DEMISING WALL AS INDICATED ON DRAWINGS.

23. INFILL EXISTING MASONRY OPENINGS AT THE BAGGAGE BUILDING WITH NEW PAINTED WOOD SIDING AS INDICATED ON DRAWINGS.

24. ALL DRAWINGS, PROJECT MANUALS, NOTES AND SPECIFICATIONS FOR THIS PROJECT ARE COMPLEMENTARY AND ARE INTENDED TO BE WORKED TOGETHER. IN THE EVENT OF CONFLICTS OR DISCREPANCIES AMONG ANY OF THESE DOCUMENTS OR WITHIN ANY ONE DOCUMENT, THE MORE STRINGENT AND/OR THE MORE EXPENSIVE ALTERNATIVE WILL BE THE DETERMINED CHOICE. HOWEVER, IN ANY CASE, THE ARCHITECT SHALL HAVE THE RIGHT TO MAKE THE FINAL DETERMINATION OF THE INTENT OF THE DOCUMENTS.

25. THE BUILDINGS UPON WHICH THE WORK SHALL BE PERFORMED IS ELIGIBLE TO BE LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. THEREFORE, EXERCISE DILIGENCE AND CIRCUMSPECTION IN THE EXECUTION OF THE WORK. DO NOT MODIFY THE WORK AS SET FORTH IN THE CONTRACT DOCUMENTS WITHOUT WRITTEN AUTHORIZATION OF THE OWNER.

DRAWING LIST

G51 COVER SHEET, LIST OF DRAWINGS, SYMBOL LIST, ABBREVIATIONS, GENERAL SCOPE OF ARCHITECTURAL WORK NOTES

SITE/CIVIL DRAWINGS
— LANDSCAPE PLAN
L1.1 SITE PLAN

L1.2 EROSION SILTATION CONTROL PLAN PHASE 1

L1.3 EROSION SILTATION CONTROL PLAN PHASE 2
L1.4 SITE UTILITY DETAILS
ARCHITECTURAL DRAWINGS

D1.1 DEMOLITION PLAN / BASEMENT LEVEL CONSTRUCTION PHASING DIAGRAM

D1.2 DEMOLITION PLAN / STATION LEVEL

A1.1 FLOOR PLAN /BASEMENT LEVEL DOOR TYPES / DOOR FRAME DETAILS / DOOR & FINISH HARDWARE SCHEDULE

A1.2 FLOOR PLAN /STATION LEVEL / ROOM FINISH SCHEDULE

A2.1 BUILDING ELEVATIONS AND DETAILS

A3.1 INTERIOR BUILDING ELEVATIONS

A3.2 INTERIOR BUILDING ELEVATIONS

A3.3 INTERIOR BREEZEWAY ELEVATIONS

A4.1 TOILET ROOM PLAN DETAILS / ELEVATION DETAILS / TOILET ACCESSORY SCHEDULE

STRUCTURAL DRAWINGS

S2.1 STRUCTURAL NOTES / PARTIAL FOUNDATION PLAN

S2.2 ROOF AND FIRST FLOOR FRAMING PLANS

S3.1 STRUCTURAL SECTIONS AND DETAILS

S4.1 STRUCTURAL SECTIONS AND DETAILS

MECHANICAL DRAWINGS

M1 HVAC PLAN / AIR CONDITIONING

M2 HVAC PLAN / HEATING

M3 HVAC DETAILS AND SECTIONS

M4 HVAC GENERAL NOTES AND SPECIFICATIONS

ELECTRICAL DRAWINGS

E1.0 ELECTRICAL COVER SHEET / LIGHT FIXTURE SCHEDULE / ELECTRICAL GENERAL NOTES / ELECTRICAL ABBREVIATIONS / MOUNTING HEIGHT SCHEDULE / ELECTRICAL SYMBOL LIST

E1.1 ELECTRICAL SITE PLAN

E2.1 ELECTRICAL DEMOLITION PLANS / BASEMENT AND FIRST FLOOR

E2.2 LIGHTING PLANS / BASEMENT AND FIRST FLOOR

E2.3 POWER AND SIGNAL PLANS / BASEMENT AND FIRST FLOOR

E3.1 PANEL SCHEDULES AND DETAILS

E4.1 ELECTRICAL SPECIFICATIONS (1 OF 2)

E4.2 ELECTRICAL SPECIFICATIONS (2 OF 2)

PLUMBING DRAWINGS

P1 PLUMBING COVER SHEET / PLUMBING SPECIFICATIONS AND NOTES

P2 PLUMBING PLANS / BASEMENT LEVEL AND GROUND FLOOR

P3 PLUMBING DETAILS / SCHEDULE AND RISER DIAGRAMS

SYMBOL LEGEND

- NEW PARTITION (GMB ON MTL STUDS) OR (CMU)
- EXISTING PARTITION/ WALL TO REMAIN
- EXISTING PARTITION/WALL TO BE REMOVED
- EXISTING EQUIPMENT/ FIXTURE ETC. TO BE REMOVED
- EXISTING LAMP POST TO BE RELOCATED
- EDGE OF EXISTING FEATURE TO BE RELOCATED
- NEW WOOD COLUMN ON VENTED ALUM. PLINTH
- INTERIOR ELEVATION
- ELEVATION NO.
- SHEET NO.
- SECTION NO.
- BUILDING SECTION MARKER
- SHEET NO.
- SECTION DETAIL
- DRAWING NO.
- DRAWING TITLE
- SHEET NO.
- NORTH ARROW (*INDICATES BUILDING NORTH*)
- CAST IRON RADIATOR (EXISTING OR RELOCATED)
- NEW 5S DOWNSPOUT
- TOILET ACCESSORY
- ROOM OR AREA NUMBER
- DOOR NUMBER

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
1600 Duke Street Suite 500 Alexandria, VA 22314 (703)683-1600 FAX (703)683-6383
VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
Bryn Mawr Building 53 Haddonfield Road 3711 Brobyn Drive 1600 Duke Street
Suite 1100 Suite 1100 Suite 200 Suite 500
129 W. Wilnut Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
53 Haddonfield Road Suite 1100 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
3711 Brobyn Drive Suite 200 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
1600 Duke Street Suite 500 Alexandria, VA 22314 (703)683-1600 FAX (703)683-6383

PHR&A
Peter Horst Rast & Associates, P.C.
Engineers, Surveyors, Planners
Landscape Architects
10560 Main Street Suite 200
Fairfax, Virginia 22030
703-691-8700 Fax 703-352-0585
PO Box 901

Construction Cost Systems, Inc.
CCS
1102 Main Street Suite 200
Fairfax, Virginia 22030
703-691-2460 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995, VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

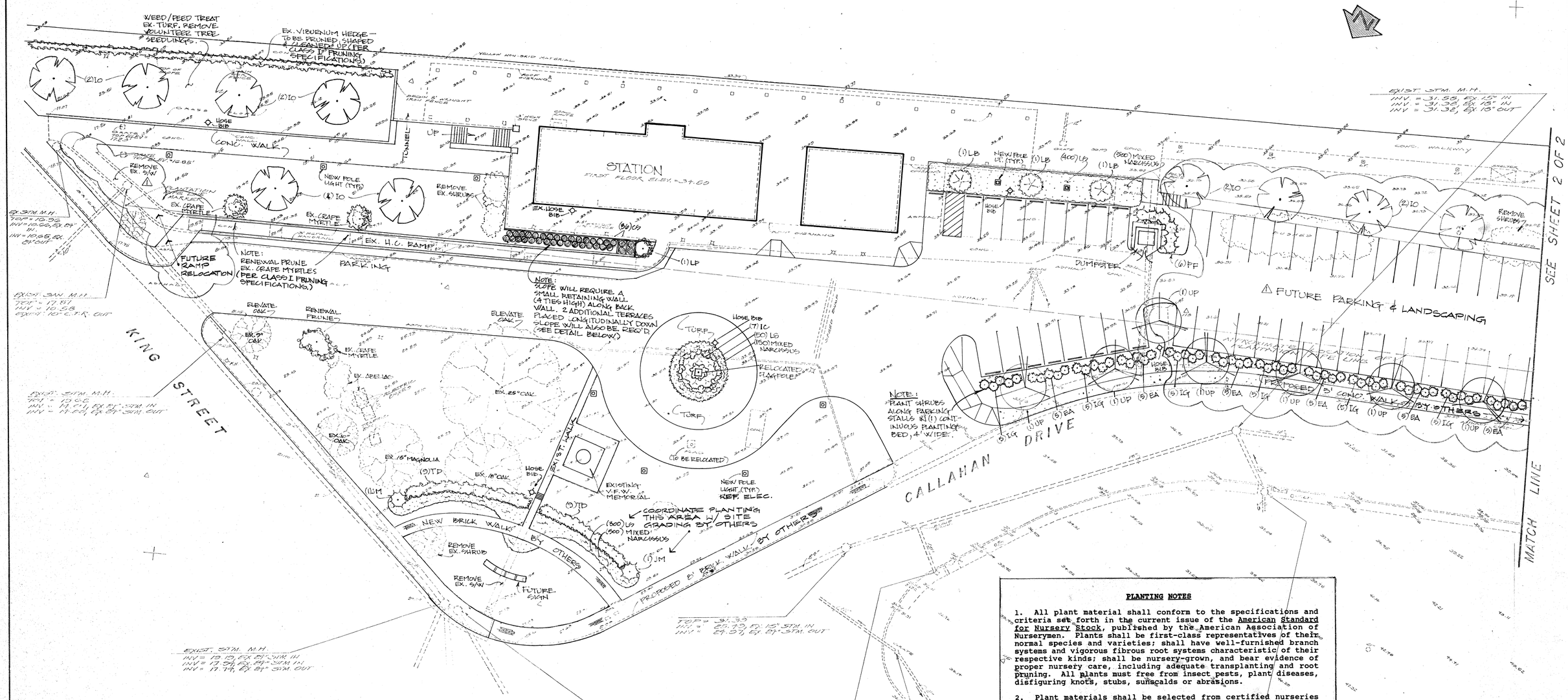
DRAWING TITLE
COVER SHEET

SCALE	NONE
DRAWN	JPE
CHECKED	GR
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	CLIENT ED.

DRAWING NO.
G51
20 of 38



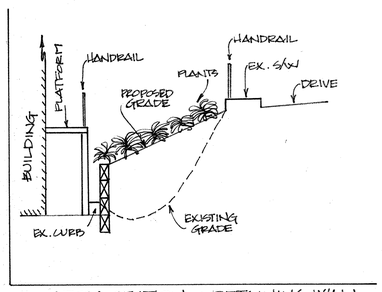
PLANT MATERIAL LIST

SYMBOL	NUMBER	BOTANICAL NAME	COMMON NAME	SIZE
JM	2	JUNIPERUS SCOPULORUM 'MOONGLOW'	MOONGLOW JUNIPER	6'-7' (B&B)
TD	18	TAXUS X MEDIA 'DENSIFORMIS'	COMPACT SPREADING YEW	24-30" (B&B)
IO	16	ILEX OPACA	AMERICAN HOLLY	6-8' (B&B)
CS	36	COTONEASTER SALICIFOLIUS 'SCARLET LEADER'	SCARLET LEADER COTONEASTER	15-18" (CONT.)
IC	7	ILEX CORNUTA 'ROTUNDA'	DWARF CHINESE HOLLY	18-24" (CONT.)
LB	3	LAGERSTROEMIA X 'BILOXI'	BILOXI CREPE MYRTLE	6-8' (B&B)
UP	12	ULMUS PARVIFOLIA	CHINESE ELM	2-2½" CAL. (B&B)
IG	30 10	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18-24" (CONT.)
EA	30 10	EUONYMUS ALATA 'COMPACTA'	WINGED EUONYMUS	18-24" (CONT.)
LG	750	LIRIOPE SPICATA	CREEPING LILY TURF	1 GT. CONT.
PF	6	PHOTINIA X FRASIERI	REDTIP PHOTINIA	4-5' (B&B)
	1150	MIXED NATURALIZING NARCISSUS		LANDSCAPE SIZE 12-15 cm.

SYMBOL	NUMBER	BOTANICAL NAME	COMMON NAME	SIZE
LP	1	LAGERSTROEMIA X 'PECOS'	PECOS CREPE MYRTLE	5-6' HT. B&B

PLANTING NOTES

1. ALL PLANTING BEDS SHOULD BE CULTIVATED TO A DEPTH OF 6". PER EACH 100 SQ. FT. OF PLANTING AREA, INCORPORATE ½ C.Y. OF PEAT MOSS.
2. HARDWOOD SHREDDED MULCH SHALL BE SPREAD OVER ALL NEW PLANTINGS, TO A DEPTH OF 3".
3. ALL PLANTING AREAS SHALL HAVE A WELL-DEFINED, TRENCHED EDGE.
4. HOSE BIB (5 TOTAL) & EXTERIOR WATER LINE INSTALLATION BY LANDSCAPE CONTR. COORDINATE WATER LINE CONNECTION & SITE WORK W/ G.C. TO MINIMIZE TRENCHING.
5. COMPACT & SOD ALL LAWN AREAS DISTURBED BY TRENCHING & PAVING GRADING.



CROSS SECTION - RETAINING WALL
N.T.S.

PLANTING NOTES

1. All plant material shall conform to the specifications and criteria set forth in the current issue of the American Standard for Nursery Stock, published by the American Association of Nurserymen. Plants shall be first-class representatives of their normal species and varieties; shall have well-furnished branch systems and vigorous fibrous root systems characteristic of their respective kinds; shall be nursery-grown, and bear evidence of proper nursery care, including adequate transplanting and root pruning. All plants must free from insect pests, plant diseases, disfiguring knots, stubs, sunscalds or abrasions.
2. Plant materials shall be selected from certified nurseries that have been inspected by state and/or federal authorities.
3. All products (mulch, peat moss, topsoil, fertilizer, etc.) used for the purposes of this contract shall be consistent with those specified in Section 244 of the most recent edition of the Virginia Department of Transportation Road and Bridge Specifications. The soil mixture used to backfill planting holes shall consist of 1 part peat moss and 4 parts Class A topsoil, as specified in Section 244 of the referenced standard.
4. All plant nomenclature shall be in accordance with Hortus III.
5. Balled and burlapped material shall be properly dug and protected to preserve a firm, natural ball of earth in contact with the roots. Ball sizes shall be in accordance with A.A.N. standards. Balled and burlapped material will not be accepted if the ball is cracked, loose, or broken.
6. Container stock shall have been grown in the container long enough to have a well-developed root system, but no longer than two years. Roots shall not protrude through drainage holes or over the rim of the container to the extent that they will be damaged when the root ball is removed from the container. Plant material which appears to be pot-bound, or has circling, kinked, or girdling roots will not be accepted.
7. All plant material in transit shall be covered to minimize dessication.
8. All material must be watered in thoroughly after installation.
9. Per the National Arborist Association, Class I pruning of selected plant material consists of removal of dead, dying, diseased, interfering, obstructing, and weak branches, as well as thinning to lessen wind resistance. The removal of such described branches is to include those on the main trunks, as well as those inside the leaf area. An occasional branch, up to 1/2" in diameter, may remain within the main leaf area to its full length when it is not practical to remove it.

LANDSCAPE PLAN

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION

RENOVATION & REHABILITATION PROJECT
PHASE I

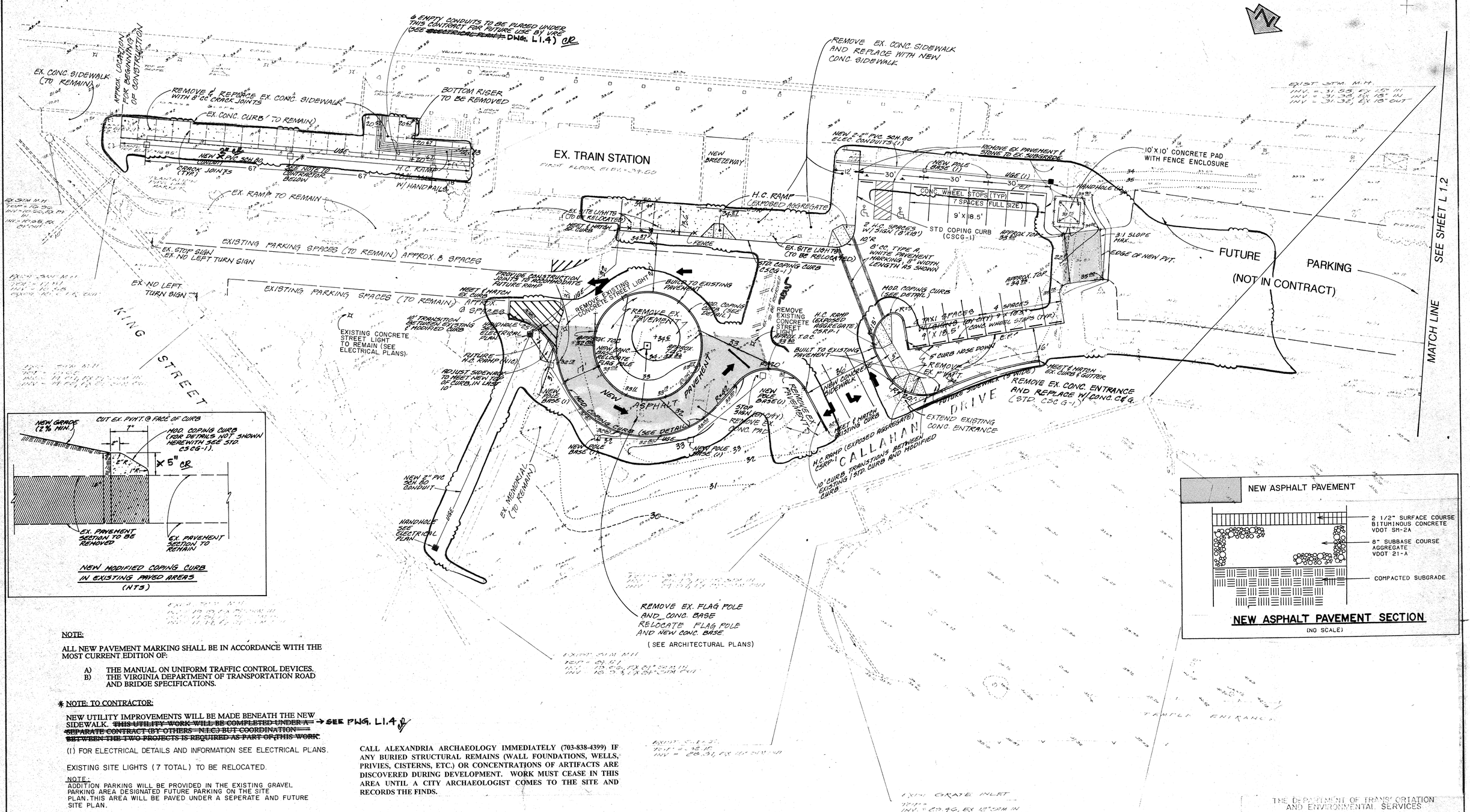
T. BOHR	NOV 94		1"=10'-0"
G.W. HUNT	NOV 94		1"=20'
Survey KENNEDY	Date SEP 94	Index No.	DATUM: U.S.C. & G.S.
Checked	Date	As Built	

APPROVED

CHIEF, ENGINEERING & DESIGN — DATE

REVISIONS
ADDED LANDSCAPE PLAN 7/24/95 DESIGN/DRAWN BY C.N.F.
⚠ PHASE 2 WORK 1/2/96 A.C.

SHEET 1 OF 1



NEW MODIFIED COPING CURB IN EXISTING PAVED AREAS (NTS)

NEW ASPHALT PAVEMENT SECTION (NO SCALE)

NOTE:

ALL NEW PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF:

A) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
B) THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.

* NOTE: TO CONTRACTOR:

NEW UTILITY IMPROVEMENTS WILL BE MADE BENEATH THE NEW SIDEWALK. ~~THIS UTILITY WORK WILL BE COMPLETED UNDER A SEPARATE CONTRACT (BY OTHERS - N.I.C) BUT COORDINATION BETWEEN THE TWO PROJECTS IS REQUIRED AS PART OF THIS WORK.~~ → SEE PWG. L1.4

(1) FOR ELECTRICAL DETAILS AND INFORMATION SEE ELECTRICAL PLANS.

EXISTING SITE LIGHTS (7 TOTAL) TO BE RELOCATED.

NOTE:
ADDITION PARKING WILL BE PROVIDED IN THE EXISTING GRAVEL PARKING AREA DESIGNATED FUTURE PARKING ON THE SITE PLAN. THIS AREA WILL BE PAVED UNDER A SEPERATE AND FUTURE SITE PLAN.

CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-838-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THIS AREA UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

PARKING TABULATION

- EXISTING SPACES

NON-RESTRICTED	48 (+/-)
HANDICAP	3
ONE HOUR	3
TOTAL	54 (+/-)

- PROPOSED SPACES

NON RESTRICTED	26
HANDICAP	2
TAXI	4
TOTAL	32

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION
RENOVATION & REHABILITATION PROJECT
PHASE I

Surveyed KENNEDY	Date SEP 94	Index No.	DATUM: U.S.C. & G. S.
Checked	Date	As Built	

APPROVED
CHIEF, ENGINEERING & DESIGN — DATE

TITLE: SITE PLAN

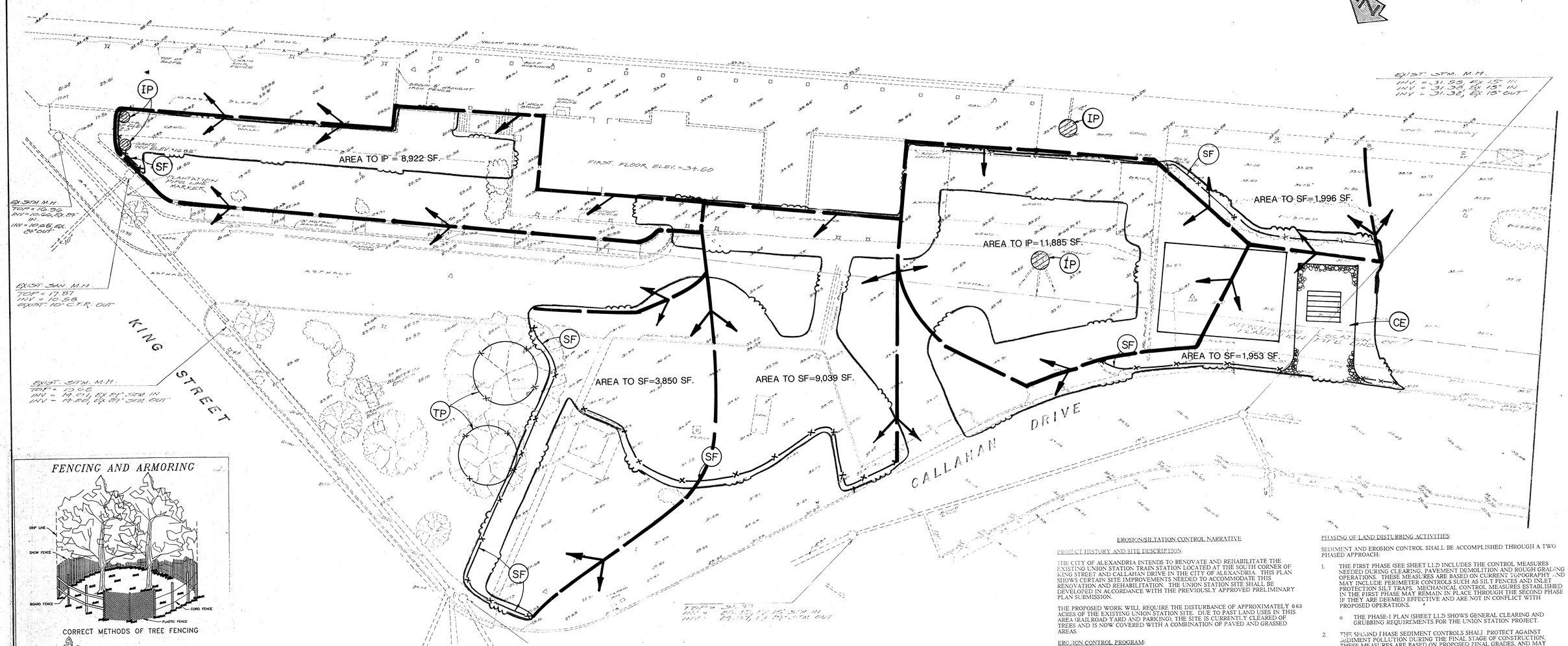
L 1.1

PHR&A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects
3998 Fair Ridge Drive, P.O. Box 901
Fairfax, Virginia 22030
703-273-8700

Offices:
Fairfax, Va.
Bridgewater, Va.
Leesburg, Va.
Rockville, Md.
Virginia Beach, Va.
Chantilly, Va.
Winchester, Va.

9105-1-1

FILE COPY

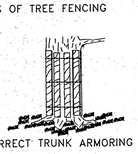


FENCING AND ARMORING

CORRECT METHODS OF TREE FENCING

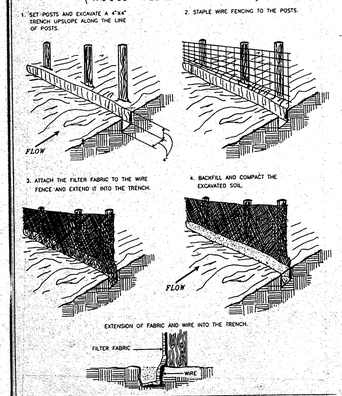


TRIANGULAR BOARD FENCE

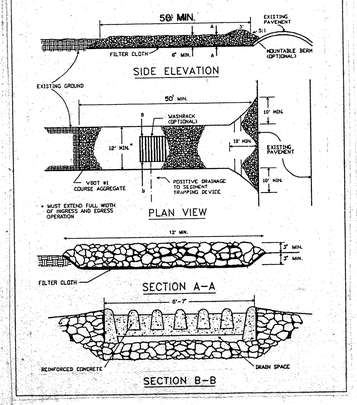


CORRECT TRUNK ARMORING

CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)

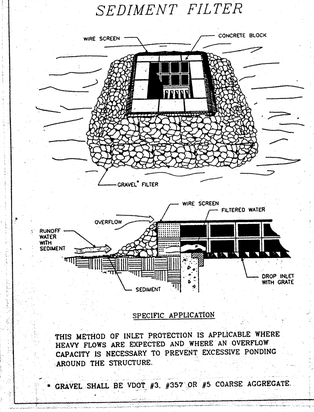


STONE CONSTRUCTION ENTRANCE



THE CONTRACTOR SHALL PROVIDE FOR TEMPORARY WATER SERVICE TO THE CONSTRUCTION ENTRANCE. THIS MAY BE A TANK TRUCK OR A CITY AUTHORIZED CONNECTION TO PUBLIC WATER.

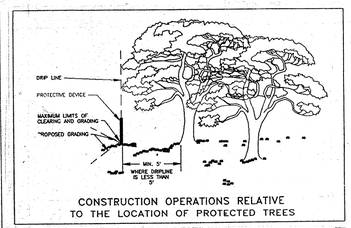
BLOCK AND GRAVEL DROP INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE.



CONSTRUCTION OPERATIONS RELATIVE TO THE LOCATION OF PROTECTED TREES

ENVIRONMENTAL SITE ASSESSMENT

TO THE BEST OF OUR KNOWLEDGE, NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, CONNECTED NON-TIDAL WETLANDS, OR ASSOCIATED RESOURCE PROTECTION AREAS EXIST ON THE SITE. FURTHERMORE, WE BELIEVE THERE ARE NO WETLANDS PERMITS REQUIRED FOR THE PROPOSED IMPROVEMENTS FOR THE SITE.

AS INDICATED BY THE CITY OF ALEXANDRIA'S FLOOD PLAIN MAP, NO 100 YEAR FLOOD PLAINS EXIST ON THE SITE AND IT IS IN ZONE.

EROSION/SILTATION CONTROL NARRATIVE

PROJECT HISTORY AND SITE DESCRIPTION:

THE CITY OF ALEXANDRIA INTENDS TO RENOVATE AND REHABILITATE THE EXISTING UNION STATION TRAIN STATION LOCATED AT THE SOUTH CORNER OF KING STREET AND CALLAHAN DRIVE IN THE CITY OF ALEXANDRIA. THIS PLAN SHOWS CERTAIN SITE IMPROVEMENTS NEEDED TO ACCOMMODATE THIS RENOVATION AND REHABILITATION. THE UNION STATION SITE SHALL BE DEVELOPED IN ACCORDANCE WITH THE PREVIOUSLY APPROVED PRELIMINARY PLAN SUBMISSION.

THE PROPOSED WORK WILL REQUIRE THE DISTURBANCE OF APPROXIMATELY 063 ACRES OF THE EXISTING UNION STATION SITE. DUE TO PAST LAND USES IN THIS AREA (RAILROAD YARD AND PARKING), THE SITE IS CURRENTLY CLEARED OF TREES AND IS NOW COVERED WITH A COMBINATION OF PAVED AND GRASSED AREAS.

EROSION CONTROL PROGRAM:

EROSION CONTROL MEASURES SHALL CONFORM TO STANDARDS SET FORTH IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. EROSION SHALL BE MINIMIZED THROUGH THE STABILIZATION OF DISTURBED AREAS AND BY DIVERTING EROSIVE FLOWS AROUND AND/OR SAFELY THROUGH THE DISTURBED AREAS. NOT MORE THAN 14 CALENDAR DAYS WILL PASS WITH ANY DISTURBED AREA REMAINING DENUDED. TEMPORARY COVER, BY SEEDING AND MULCHING, SHALL BE PROVIDED ON ALL AREAS TO BE EXPOSED FOR PERIODS IN ACCESS OF 14 DAYS BEFORE STABILIZATION CAN BE ACHIEVED. PERMANENT STABILIZATION SHOULD BE PROVIDED ON ALL DISTURBED AREAS AS SOON AS POSSIBLE UPON ACHIEVING FINAL GRADES, BY MEANS OF SEEDING AND MULCHING, SODDING AND PEGGING, PAVING, OR BY OTHER APPROVED MEANS.

SILTATION CONTROL PROGRAM:

SILTATION CONTROL SHALL CONFORM TO STANDARDS SET FORTH IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. SILTATION CONTROL WILL BE ACCOMPLISHED THROUGH THE INSTALLATION OF TEMPORARY GRAVEL CONSTRUCTION ENTRANCE (CE) AND OTHER MECHANICAL CONTROL MEASURES SUCH AS: SILT FENCING (SF), STORM DRAINAGE INLET PROTECTION TRAPS (IP), AND OTHER MEASURES AS PROPOSED ON THE PLAN, AND IDENTIFIED AS APPLICABLE TO THE PROJECT ON THE "EROSION AND SEDIMENT CONTROL DETAILS" (SHEET L1.2). OTHER MEASURES, BEYOND THOSE PROPOSED, MAY BE USED AT THE OPTION AND DISCRETION OF THE DEVELOPER/INSPECTOR.

BECAUSE OF THE NATURE OF THE PROPOSED DEMOLITION WORK, A SMALL AREA NEAR THE SOUTHERN CALLAHAN DRIVE ENTRANCE WILL NOT HAVE MECHANICAL SEDIMENT CONTROL DEVICES. IN THIS AREA THE CONTRACTOR SHALL PROVIDE STABILIZATION IMMEDIATELY UPON ACHIEVING PROPER SUBGRADE.

PHASING OF LAND DISTURBING ACTIVITIES:

SEDIMENT AND EROSION CONTROL SHALL BE ACCOMPLISHED THROUGH A TWO PHASED APPROACH:

1. THE FIRST PHASE (SEE SHEET L1.2) INCLUDES THE CONTROL MEASURES NEEDED DURING CLEARING, PAVEMENT DEMOLITION AND ROUGH GRADING KING STREET AND CALLAHAN DRIVE IN THE CITY OF ALEXANDRIA. THIS PLAN OPERATIONS. THESE MEASURES ARE BASED ON CURRENT TOPOGRAPHY AND MAY INCLUDE PERIMETER CONTROLS SUCH AS SILT FENCES AND INLET SHOWS CERTAIN SITE IMPROVEMENTS NEEDED TO ACCOMMODATE THIS PROTECTION SILT TRAPS. MECHANICAL CONTROL MEASURES ESTABLISHED RENOVATION AND REHABILITATION. THE UNION STATION SITE SHALL BE IN THE FIRST PHASE MAY REMAIN IN PLACE THROUGH THE SECOND PHASE DEVELOPED IN ACCORDANCE WITH THE PREVIOUSLY APPROVED PRELIMINARY IF THEY ARE DEEMED EFFECTIVE AND ARE NOT IN CONFLICT WITH PLAN SUBMISSION. PROPOSED OPERATIONS.
   - THE PHASE-1 PLAN (SHEET L1.2) SHOWS GENERAL CLEARING AND GRUBBING REQUIREMENTS FOR THE UNION STATION PROJECT.
2. THE SECOND PHASE SEDIMENT CONTROLS SHALL PROTECT AGAINST SEDIMENT POLLUTION DURING THE FINAL STAGE OF CONSTRUCTION. THESE MEASURES ARE BASED ON PROPOSED FINAL GRADES, AND MAY INCLUDE INLET PROTECTION SEDIMENT TRAPS, SILT FENCES, AND OTHER DEVICES. ALL E/S CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREAS ABOVE THEM ARE ADEQUATELY STABILIZED AND APPROVED BY THE INSPECTOR.

THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT MUD AND/OR OTHER DEBRIS FROM BEING TRACKED ONTO EXISTING ROADS BY TRUCKS OR OTHER CONSTRUCTION TRAFFIC. SHOULD OFF-SITE AREAS BECOME POLLUTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE AFFECTED AREAS TO THE SATISFACTION OF THE INSPECTOR.

MAINTENANCE PROGRAM:

EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE INSPECTED DAILY BY THE SUPERINTENDENT OR HIS REPRESENTATIVE. ALL DAMAGED STRUCTURAL MEASURES ARE TO BE REPAIRED BY THE END OF EACH DAY. SEDIMENT CONTROL MEASURES ARE TO BE CLEANED UPON NEED AND THE EXCAVATED MATERIALS DISPOSED OF BY SPREADING ON THE SITE OR UPON DESIGNATED ON-SITE DISPOSAL AREAS. CONTROL MEASURES MAY NOT BE REMOVED UNTIL AFTER THE DISTURBED AREAS ABOVE THEM HAVE BEEN STABILIZED AND ONLY AS APPROVED BY THE INSPECTOR.

DUST CONTROL:

CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST DURING THESE OPERATIONS. THIS SHALL BE BY VEGETATIVE COVER (SEED AND MULCH AS DESCRIBED IN SECTIONS 3.31 AND 3.35 OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK). ALL AREAS SHALL BE SPRINKLED WITH WATER AS NEEDED TO ALLAY DUST UNTIL A STABLE GROUND SURFACE IS ESTABLISHED OR UNTIL PROPOSED LAND DISTURBING ACTIVITIES ARE COMPLETED. DUST CONTROL SHALL BE IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST EDITION).

THIS SHEET TO BE USED FOR EROSION / SILTATION CONTROL ONLY !

TITLE:

EROSION / SILTATION CONTROL PLAN PHASE ONE

PHR&A
Patton Harris Rust & Associates, pc.
Engineers, Surveyors, Planners, Landscape Architects
3998 Fair Ridge Drive, P.O. Box 901
Fairfax, Virginia 22030
703-273-8700

Offices:
Fairfax, Va.
Bridgewater, Va.
Leesburg, Va.
Rockville, Md.
Virginia Beach, Va.
Chantilly, Va.
Winchester, Va.

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION
RENOVATION & REHABILITATION PROJECT
PHASE I

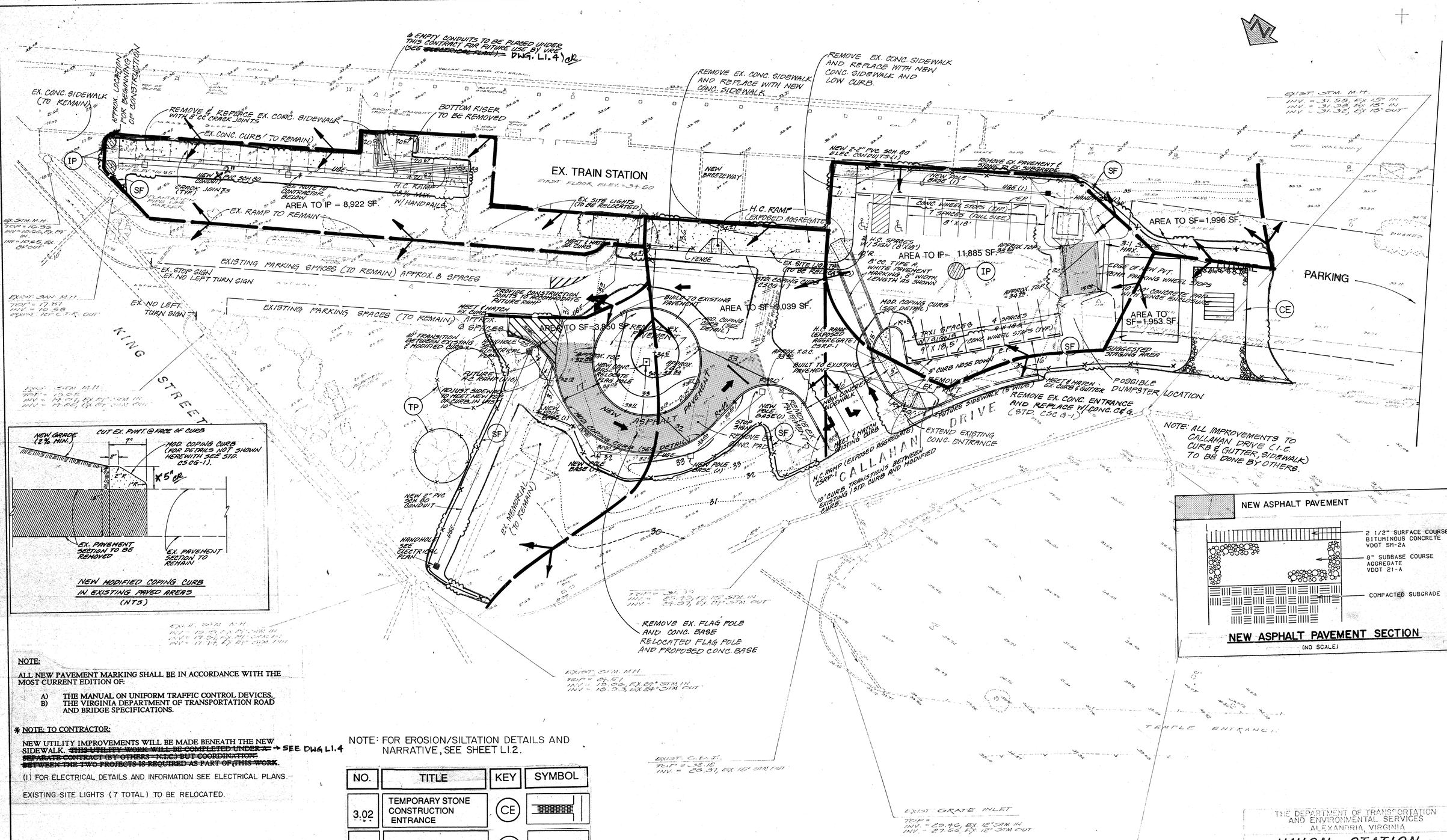
Designed	G.W. HUNT	NOV 94	1" = 20'
Surveyed	KENNEDY	Date SEP 94	Index No. DATUM: U.S.C. & G. S.
Checked		Date	As Built

APPROVED

CHIEF, ENGINEERING & DESIGN DATE

REVISIONS

L1.2
9105-1-1
Sht 38



NOTE:

ALL NEW PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF:

A) THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
B) THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.

* NOTE: TO CONTRACTOR:

NEW UTILITY IMPROVEMENTS WILL BE MADE BENEATH THE NEW SIDEWALK. ~~THIS UTILITY WORK WILL BE COMPLETED UNDER A SEPARATE CONTRACT (BY OTHERS - N.I.C.) BUT COORDINATION BETWEEN THE TWO PROJECTS IS REQUIRED AS PART OF THIS WORK.~~ → SEE DWG LI.4

(I) FOR ELECTRICAL DETAILS AND INFORMATION SEE ELECTRICAL PLANS.

EXISTING SITE LIGHTS (7 TOTAL) TO BE RELOCATED.

NOTE: FOR EROSION/SILTATION DETAILS AND NARRATIVE, SEE SHEET LI.2.

NO.	TITLE	KEY	SYMBOL
3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE	
3.05	SILT FENCE	SF	
3.07	STORM DRAIN INLET PROTECTION	IP	
3.38	TREE PRESERVATION AND PROTECTION	TP	
	LIMITS OF WORK		

PARKING TABULATION

• EXISTING SPACES	
NON-RESTRICTED	48 (+/-)
HANDICAP	3
ONE HOUR	3
TOTAL	54 (+/-)
• PROPOSED SPACES	
NON-RESTRICTED	26
HANDICAP	2
TAXI	4
TOTAL	32

THIS SHEET TO BE USED FOR EROSION / SILTATION CONTROL ONLY !

EROSION / SILTATION CONTROL PLAN PHASE TWO

PHR&A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects
3998 Fair Ridge Drive, P.O. Box 901
Fairfax, Virginia 22030
703-273-8700

Offices:
Fairfax, Va.
Bridgewater, Va.
Leesburg, Va.
Rockville, Md.
Virginia Beach, Va.
Chantilly, Va.
Winchester, Va.

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION
RENOVATION & REHABILITATION PROJECT
PHASE I

J. BEHR	NOV. 94		1"=20'
G.W. HUNT	NOV. 94		
Survey Checked KENNEDY	Date SEP. 94	Index No. As Built	DATUM: U.S.C. & G.S.

APPROVED
CHIEF, ENGINEERING & DESIGN DATE

REVISIONS

LI.3
9105-1-1

6 of 38

EXIST. GRATE INLET
TOP = 17.23
INV = 14.00, 18" IN
INV = 13.83, 18" OUT

EX GRATE INLET
TOP = 10.85
INV = 3.10 18" IN
INV = 2.93 (CROSS) IN
INV = 12.05, 12" OUT

EXIST. SAN. M.H.
TOP = 17.80
INV = 12.90

EX STM M.H
TOP = 10.32
INV = 10.00, 60.8° IN
INV = 9.66 EX. 36" OUT

EXIST. SAN M.H
TOP = 17.87
INV = 7.68, 10" OUT
INV. = 13.27, 10" IN

EXIST. SAN M.H.
TOP = 10.62
INV = 7.01, EX 24" STM IN
INV = 11.00, EX 24" STM OUT

EXIST. STM. M.H.
INV. = 19.12, EX 24" STM IN
INV = 17.94, EX. 24" STM IN
INV = 17.74, EX 24" STM. OUT

EXIST. STM. M.H.
TOP = 29.57
INV = 19.09, EX 24" STM IN
INV = 18.93, EX 24" STM OUT

EXIST. C.D.I.
TOP = 38.12
INV. = 28.31, EX. 15" STM OUT

TOP = 31.39
INV = 25.43, EX. 15" STM. IN
INV = 24.57, EX. 24" STM. OUT

EXIST. GRATE INLET
TOP =
INV. = 29.46, EX. 12" STM. IN
INV. = 27.04, EX. 12" STM OUT

EXIST STM. M.H
INV. = 31.53 EX 15" IN
INV. = 31.38 EX 15" IN
INV. = 31.32, EX 18" OUT

FIRST FLOOR ELEV. = 34.50

KING STREET

CALLAHAN DRIVE

TEMPLE ENTRANCE

APPROXIMATE LOCATION OF PLANTATION PIPE LINE

PLANTATION PIPE LINE MARKER

SEE SHEET 2 OF 2

MATCH LINE

THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION
RENOVATION & REHABILITATION PROJECT
EXISTING CONDITIONS

Design G. BOHR	Date NOV 94	Field Book LOG NO 475	
Drawn S.W. HUNT	Date NOV 94	Scale: Horiz. 1"=20'	Vert.
Survey KENNEDY	Date SEP 94	Index No. DATUM: U.S.C. & G.S.	
Checked	Date	As Built	

APPROVED

CHIEF, ENGINEERING & DESIGN DATE

REVISIONS

L1.4

EXIST. GRATE INLET
TOP = 17.23
INV = 14.03, 18" IN
INV = 13.83, 18" OUT

EX. GRATE INLET
TOP = 16.85
INV = 13.10, 18" IN
INV = 12.28, 18" STUB IN
INV = 12.05, 18" OUT

EXIST. SAN. M.H.
TOP = 17.80
INV = 12.50
(MANHOLE TO BE REMOVED)

SEE NOTE 2

REMOVE & REPLACED EXIST. CONC. WALK

PROP. NEW 10" PIPE

EXISTING 10" CLAY PIPE (TO REMAIN)

CLEAN OUT

PLANTATION PIPE LINE MARKER

PROP. 6" PVC.-SDR 25- SANIT. LATERAL @ MIN. 2% GRADE

CLEAN OUT

CLEAN OUT

PLUG

SEE NOTE #3 & 5

FIRST. FLOOR ELEV. = 34.50

EXIST. STM. M.H.
TOP = 16.96
INV = 10.62, 8" STM IN
INV = 10.26, EX. 24" OUT

EXIST. SAN. M.H.
TOP = 17.87
INV = 10.58, 10" OUT
INV = 13.27, 10" IN (TO BE REMOVED.)
INV. PROP. 6" P.V.C. IN = 12.70

EXIST. STM. M.H.
TOP = 19.56
INV = 14.01, EX. 24" STM IN
INV = 11.80, EX. 24" STM. OUT

EXIST. STM. M.H.
INV = 19.19, EX. 24" STM. IN
INV = 17.94, EX. 24" STM IN
INV = 17.74, EX. 24" STM. OUT

EXIST. STM. M.H.
TOP = 24.57
INV = 19.06, EX. 24" STM. IN
INV = 18.93 EX. 24" STM OUT

EXIST. STM. M.H.
TOP = 31.39
INV = 25.93, EX. 15" STM. IN
INV = 24.31, EX. 24" STM. OUT

EXIST. C.D.I.
TOP = 32.12
INV = 28.31, EX. 15" STM OUT

EXIST. GRATE INLET
TOP = 29.46, EX. 12" STM IN
INV = 27.66, EX. 12" STM OUT

EXIST. C.D.I.
TOP = 36.24
INV = 32.52, EX. 15" STM. OUT
INV = 33.82, EX. 6" STM. IN

EXIST. STM. M.H.
INV = 31.58, EX. 15" IN
INV = 31.38, EX. 18" IN
INV = 31.32, EX. 18" OUT

APPROXIMATE PLANTATION LOCATION OF PIPE LINE

KING STREET

CALLAHAN DRIVE

TEMPLE ENTRANCE

SEE SHEET 2 OF 2 MATCH LINE

NOTES:

1. REMOVE EXISTING SANITARY SEWER MANHOLE & 10 INCH PIPE AS DIRECTED.
2. CONNECT EXISTING 10 INCH CLAY PIPE TO EXISTING GRATE INLET IN LOCATION OF EXISTING PIPE STUB @ ELEVATION 12.28 ±
3. TIE EXISTING SANITARY SEWER LATERAL FROM TRAIN STATION BUILDING TO NEW PROPOSED 6" P.V.C. SANITARY LATERAL AND PLUG END OF 10 INCH CLAY PIPE AS DIRECTED. COST TO BE INCLUDED IN QUANTITY ITEM # 4.
4. REMOVE & REPLACE EXISTING CONCRETE SIDEWALK WITH MIN. 10' WIDE X 4 INCH THICK CONCRETE SIDEWALK AT SAME GRADE.
5. CONTRACTOR SHALL CONFIRM THE ELEVATION OF THE EXISTING SANITARY SEWER LATERAL AT THE BUILDING PRIOR TO STARTING TO CONSTRUCT THE PROPOSED NEW 6 INCH P.V.C. LATERAL.

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY	UNIT
1	REMOVE & REPLACE EXISTING		
	CONCRETE SIDEWALK	250	S.Y.
2	PROP. NEW 10" EXTRA STRENGTH		
	CONCRETE PIPE OR 10" SDR 35		
	P.V.C. PIPE	25	L.F.
3	REMOVE EXISTING SANITARY		
	MANHOLE AND EXISTING 20 L.F ±		
	OF 10 INCH PIPE	LUMP SUM	L.S.
4	PROP. 6 INCH P.V.C. SDR 35		
	PIPE WITH CLEANOUTS COMPLETE		
	AND IN PLACE	185	L.F.
5	RESTORE DISTURBED AREAS WITH		
	MIN. 4 INCH CLASS "B" TOPSOIL		
	SEED, FERTILIZE MULCH AS		
	DIRECTED.	LUMP SUM	L.S.

THE DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES
ALEXANDRIA, VIRGINIA

UNION STATION

RENOVATION & REHABILITATION STORM SEWER — SANITARY SEWER AND SIDEWALK MODIFICATIONS

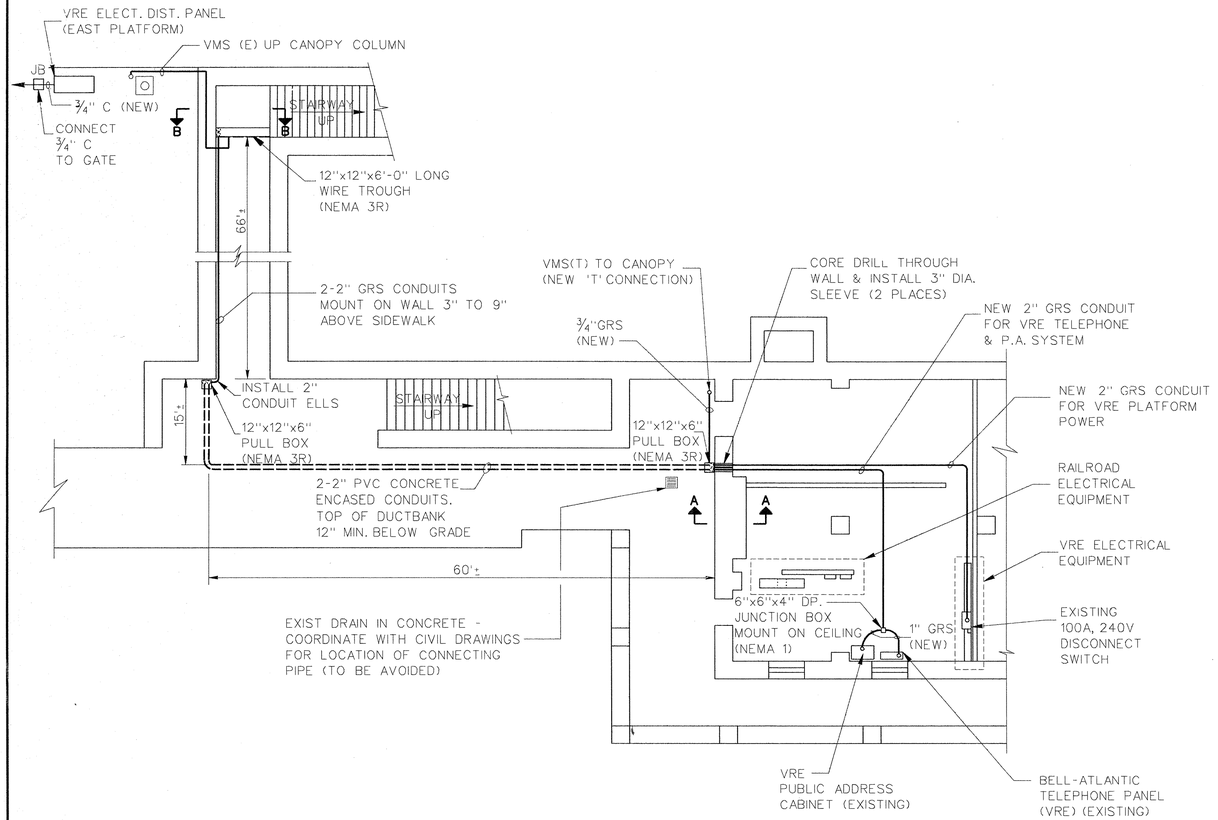
Design G. BOHR	Date NOV 94	Field Book LOG NO 475	
Drawn G.W. HUNT	Date NOV 94	Scale: Horiz. 1"=20'	Vert.
Survey KENNEDY	Date SEP 94	Index No.	DATUM: U.S.C. & G. S.
Checked	Date	As Built	

APPROVED

CHIEF, ENGINEERING & DESIGN — DATE

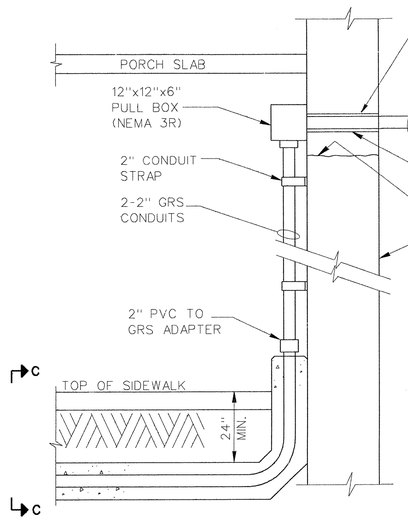
REVISIONS

SHEET L 1.4A



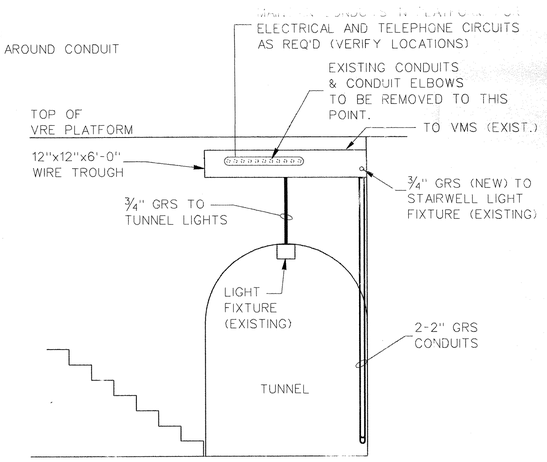
NEW VRE ELECTRICAL PLAN - BASEMENT/GROUND LEVEL

SCALE: 1/8"=1'-0" (APPROX.)



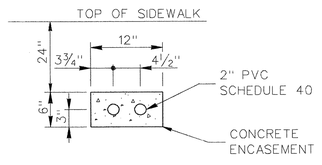
SECTION A-A

SCALE: 1"=1'-0"



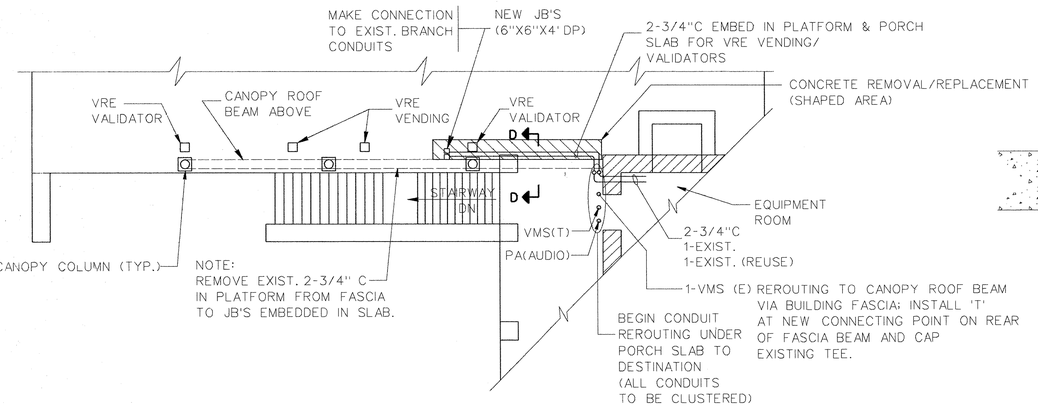
SECTION B-B

SCALE: 3/8"=1'-0"



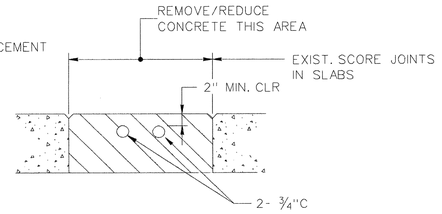
SECTION C-C

SCALE: 1"=1'-0"



NEW VRE ELECTRICAL PLAN - PLATFORM/ROOF LEVEL

SCALE: 1/8"=1'-0" (APPROX.)



SECTION D-D

SCALE: 1"=1'-0"

NOTE:

THE MODIFICATIONS SHOWN ARE TO BE PERFORMED SO AS TO AVOID INTERRUPTIONS OF SERVICE TO VRE FACILITIES: CUT-OVER OF SERVICE AND INSTALLATION OF CONDUITS AND WIRE TROUGHS IN TUNNEL AND STAIRWELL SHALL BE PERFORMED BETWEEN THE HOURS OF 9 A.M. TO 3 P.M. WEEKDAYS SO AS TO ALLOW PEDESTRIAN ACCESS FOR VRE CUSTOMERS. CONTACT MR. LOU WOOLNER OF VRE AT (703) 642-3808, 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

GENERAL NOTES:

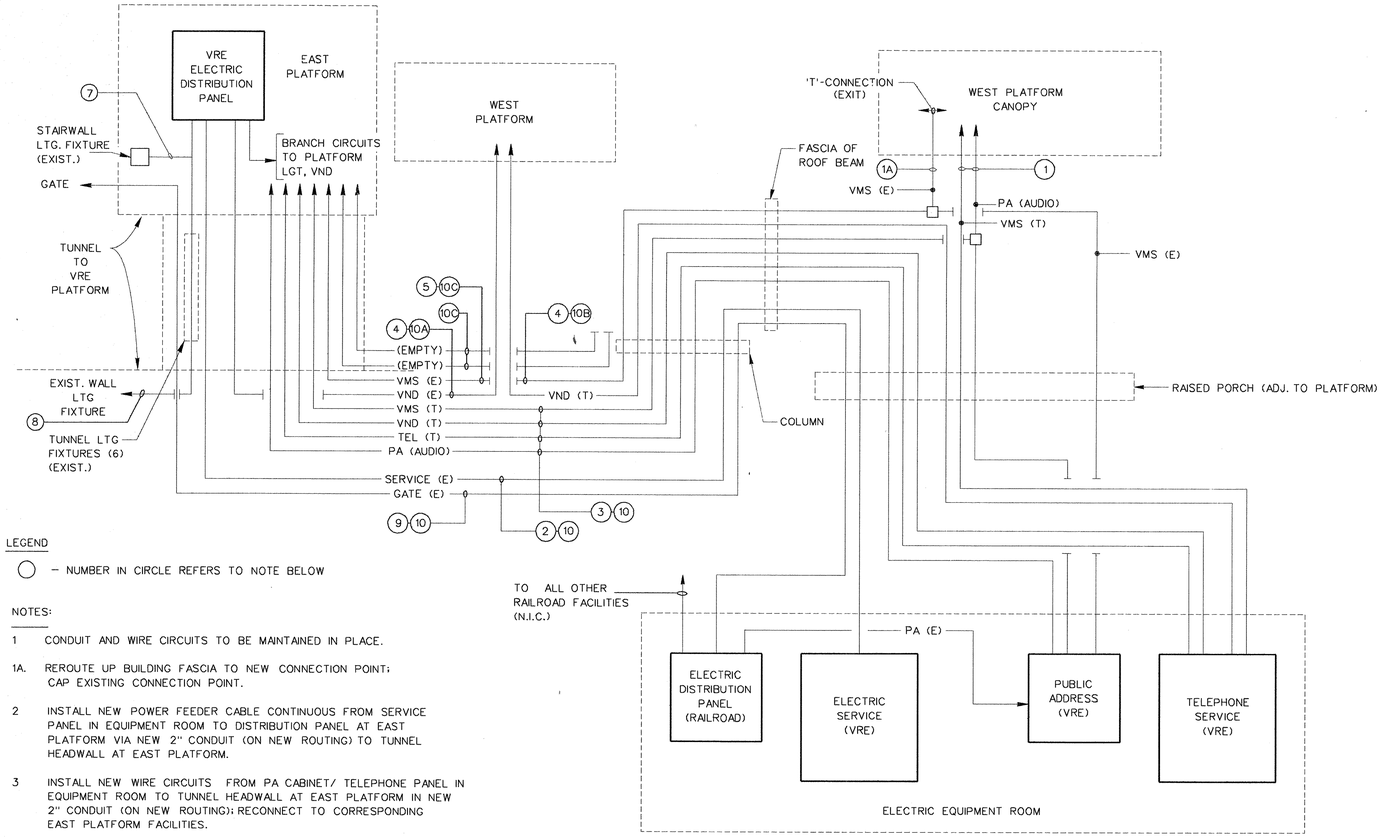
1. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND THE REQUIREMENTS OF ALL LOCAL CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORK.
2. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DRAWINGS/SPECIFICATIONS AND BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIALS AND EQUIPMENT AT EACH LOCATION AS INDICATED, WITHOUT SUBSTANTIAL ALTERATION. INASMUCH AS THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. FURNISHING SUCH FITTINGS AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS SHALL BE AT NO ADDITIONAL COST.
3. THE CONTRACTOR SHALL EXAMINE THE SITE AND OBSERVE THE CONDITIONS UNDER WHICH THE WORK WILL BE DONE OR OTHER CIRCUMSTANCES WHICH WILL AFFECT THE CONTEMPLATED WORK. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY FOR ANY ERROR OR NEGLIGENCE ON THE CONTRACTOR'S PART.
4. THE CONTRACTOR SHALL VERIFY EXACT LOCATION, SIZE AND EXTENT OF ALL EXISTING UTILITIES, OBSTRUCTIONS AND/OR OTHER CONDITIONS WHICH MAY AFFECT THE PROPOSED WORK UNDER THE PROJECT. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE TO EXISTING WORK AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS WORK.
5. THE CONTRACTOR SHALL COORDINATE ELECTRICAL WORK WITH OTHER TRADES.
6. UNLESS OTHERWISE NOTED, USE MINIMUM CONDUCTOR SIZE NO. 12 AWG STRANDED AND MINIMUM CONDUIT SIZE ¾". FOR COMMUNICATION CIRCUITS: USE STRANDED 6-PAIR WRAPPED CABLE (22 GAUGE) FOR VND(T) AND PUBLIC PHONE (T). USE STRANDED 4-CONDUCTOR (22 GAUGE) CABLE WITH RJ-11 CONNECTORS FOR VMS(T). ALL COMMUNICATION CIRCUITS WIRING SHALL BE CONTINOUS FROM ORIGIN TO DESTINATION. NO SPLICES ARE PERMITTED. FOR PUBLIC ADDRESS AUDIO, CABLE, USE SHIELDED SINGLE PAIR, 18 AWG STRANDED CONUCTORS.
7. CONDUIT RUNS SHOWN ARE DIAGRAMMATICAL. THE CONTRACTOR SHALL INSTALL EMBEDDED CONDUIT IN THE MOST DIRECT ROUTE BETWEEN TERMINATIONS AND AVOIDING INTERFERANCE WITH UTILITY LINES, AND FEATURES OF OTHER DISCIPLINES SUCH AS DRAINAGE STRUCTURES ETC.
8. EXPOSED CONDUIT ON WALLS AND CEILING SHALL BE PARALLEL OR PERPENDICULAR TO WALLS, CEILING AND FLOOR, IN A MANNER WHICH MINIMIZES BENDS AND ELBOWS, BUT FOLLOWS THE LINES OF THE STRUCTURE TO WHICH THEY ARE ATTACHED.
9. ALL PVC CONDUIT TO BE ENCASED IN 2" MINIMUM CONCRETE ENVELOPE ALL AROUND WHEN BURIED UNDERGROUND
10. UNDERGROUND DUCTBANKS SHALL MAINTAIN ONE FOOT MINIMUM CLEARANCE FROM ALL OTHER UTILITIES.
11. ALL CONCRETE REMOVAL REQUIRED SHALL BE ACCOMPLISHED WITH NEAT LINE SAWCUTS 2" DEPTH ON EXISTING SCORE LINES. REPLACE WITH CONCRETE f'c = 3500 PSI MIN. LIGHT BROOM FINISH REQUIRED
12. PVC CONDUITS SHALL BE SCHEDULE 40, GRAY IN COLOR.
13. DIRECTORIES OF EXISTING OR NEW PANEL BOARDS MODIFIED OR INSTALLED BY THE CONTRACTOR SHALL BE REPLACED WITH A NEW TYPED DIRECTORY IDENTIFYING REROUTED AND NEW CIRCUITS.
14. INSTALL WIRE TROUGH AND PULLBOXES USING ⅜" DIA.X 1½" LONG MINIMUM EXPANSION ANCHORS.
15. CAP ALL REMAINING UNUSED EMBEDDED CONUITS AT BUILDING FACIA. CUT FLUSH AND FULLY PLUG ALL EXISTING UNUSED CONDUITS IN PORCH SLAB WITH NON-SHRINK MORTAR. REMOVE ALL EXISTING CONDUIT ANCHORS AND PATCH.
16. COORDINATE WITH CIVIL DRAWINGS FOR REQ'D SIDEWALK REMOVAL/REPLACEMENT.

DESIGNED: B.T.	DE LEUW CATHER AND COMPANY	VIRGINIA RAILWAY EXPRESS	CONTRACT No.
DRAWN: W.L.	IN ASSOCIATION WITH	NVTC/PRTC	DRAWING No. VRE – E1
CHECKED: R.G.	DEWBERRY & DAVIS · VICTOR WILBURN ARCHITECTS	SCALE: AS SHOWN · DATE: MAR. 1, 1996	
APPROVED: R.F.	DESIGNER:	VRE ELECTRICAL MODIFICATIONS ALEXANDRIA STATION	SHEET No. L 1.4B

No.	DATE	DESCRIPTION	BY
REVISIONS			

o:\dgn\vre\vdata\vreelec.dgn
Mon Mar 4 12:35:57 1996

Mar 4 12-38-22 1996 O:\BYERS\QUEUE\VERS5.acf O:\PRFS\VREELEC.PRF



LEGEND

◯ – NUMBER IN CIRCLE REFERS TO NOTE BELOW

NOTES:

1 CONDUIT AND WIRE CIRCUITS TO BE MAINTAINED IN PLACE.

1A. REROUTE UP BUILDING FASCIA TO NEW CONNECTION POINT; CAP EXISTING CONNECTION POINT.

2 INSTALL NEW POWER FEEDER CABLE CONTINUOUS FROM SERVICE PANEL IN EQUIPMENT ROOM TO DISTRIBUTION PANEL AT EAST PLATFORM VIA NEW 2" CONDUIT (ON NEW ROUTING) TO TUNNEL HEADWALL AT EAST PLATFORM.

3 INSTALL NEW WIRE CIRCUITS FROM PA CABINET/ TELEPHONE PANEL IN EQUIPMENT ROOM TO TUNNEL HEADWALL AT EAST PLATFORM IN NEW 2" CONDUIT (ON NEW ROUTING); RECONNECT TO CORRESPONDING EAST PLATFORM FACILITIES.

4 INSTALL NEW WIRE CIRCUITS CONTINUOUS FROM APPROPRIATE SERVICE PANEL IN EQUIPMENT ROOM TO WEST PLATFORM EQUIPMENT (4- (E), 2- (T)). INSTALL IN NEW (REROUTED) CONDUITS IN WEST PLATFORM CONCRETE SLAB, CONNNECTED TO EXIST CONDUITS AT BUILDING FACIA. NOTE: REUSE ONE EMPTY CONDUIT FROM EQUIPMENT ROOM FOR (E).

5 INSTALL NEW WIRE CIRCUIT AND CONNECT TO VRE DISTRIBUTION PANEL AT EAST PLATFORM; ROUTE VIA 2"C BACK TO WIRE TROUGH DISCONNECT CIRCUIT FROM PA CABINET IN EQUIPMENT ROOM.

6 DISCONNECT CIRCUIT FROM VRE DISTRIBUTION PANEL AT EAST PLATFORM; INSTALL NEW WIRE CIRCUIT IN NEW CONDUIT FROM NEW VRE DISTRIBUTION PANEL IN EQUIPMENT ROOM.

7 RECONNECT TO SECURITY LIGHTING CIRCUIT AT VRE DISTRIBUTION PANEL AT EAST PLATFORM VIA NEW CONDUIT FROM NEW WIRE TROUGH TO STAIRWELL LIGHT FIXTURE.

8 DISCONNECT FROM VRE LIGHTING CIRCUIT AND CONNECT TO RAILROAD WALL LIGHTING CIRCUIT IN NEW CONDUIT (COORDINATE WITH RAILROAD) ; TERMINATE /REMOVE VRE CONDUIT BACK TO WEST END TUNNEL LIGHT.

9 DISCONNECT CIRCUIT FROM RAILROAD ELECTRICAL PANEL (COORDINATE WITH RAILROAD) AND CONNECT TO VRE DISTRIBUTION PANEL AT EAST PLATFORM. PROVIDE NEW CONDUIT AS NECESSARY.

10 REMOVE CONDUIT AND WIRE FROM SERVICE EQUIPMENT ROOM TO TUNNEL HEADWALL AT EAST PLATFORM.

10A REMOVE CONDUIT AND WIRE FROM TUNNEL HEADWALL AT EAST PLATFORM TO JUNCTION BOX IN WEST PLATFORM.

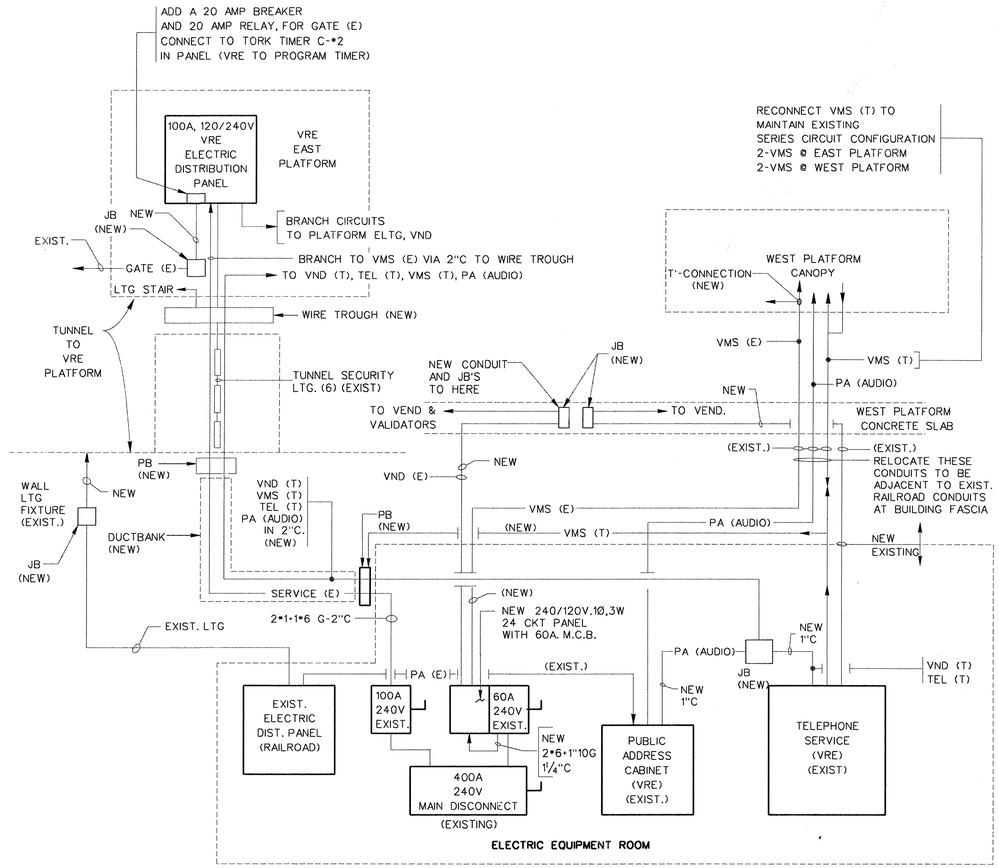
10B REMOVE CONDUIT AND WIRE FROM BUILDING FASCIA TO JUNCTION BOX IN WEST PLATFORM.

10C REMOVE CONDUIT FROM TUNNEL HEADWALL AT EAST PLATFORM TO BUILDING FACIA (OR TO TERMINATION POINT)

EXISTING VRE DISTRIBUTION SCHEMATIC

DEFINITIONS: "RAILROAD" REFERS TO STATION FACILITIES THAT ARE NOT THE PROPERTY OF THE VRE.

LTG	LIGHTING
VND	VRE VENDING EQUPMENT (TICKET VENDORS & VALIDATORS)
TEL	PUBLIC TELEPHONES
PA	PUBLIC ADDRESS SYSTEM
VMS	ELECTRONIC VARIABLE MESSAGE SIGNS
(E)	ELECTRIC
(T)	TELEPHONE/COMMUNICATION



VRE SCHEMATIC (NEW)

DESIGNED: B.T.					
DRAWN: W.L.					
CHECKED: R.G.					
APPROVED: R.F.	No.	DATE	DESCRIPTION	BY	
	REVISIONS				

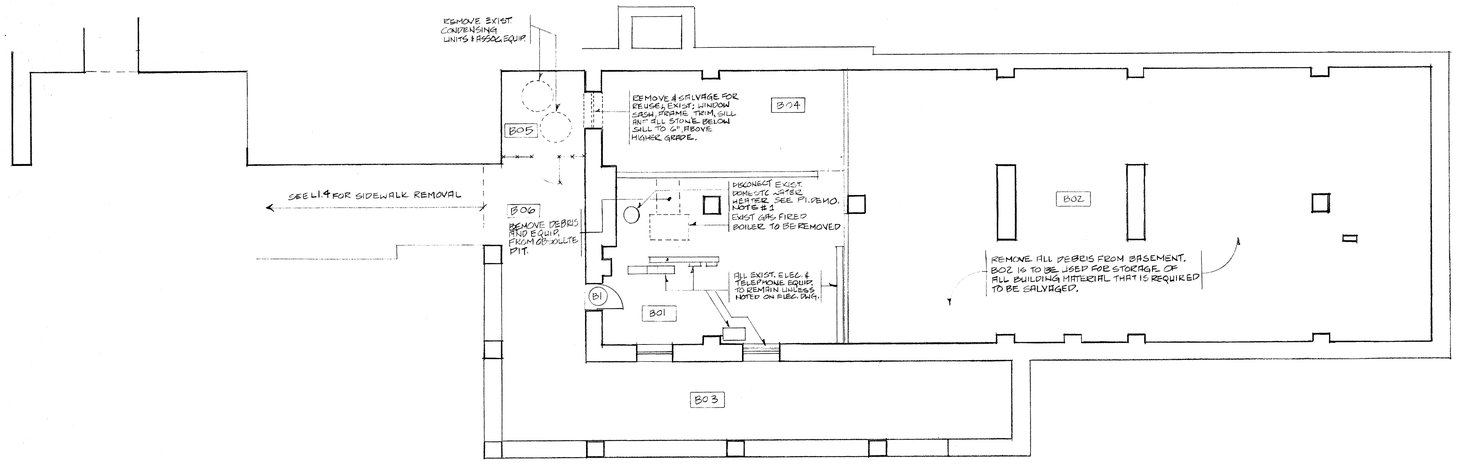
DE LEUW CATHER AND COMPANY
IN ASSOCIATION WITH
DEWBERRY & DAVIS — VICTOR WILBURN ARCHITECTS
DESIGNER:

VIRGINIA RAILWAY EXPRESS
NVTC/PRTC
SCALE: AS SHOWN | DATE: MAR. 1, 1996

VRE ELECTRICAL MODIFICATIONS ALEXANDRIA STATION

CONTRACT No.
DRAWING No. VRE - E2
SHEET No. L 1.4C

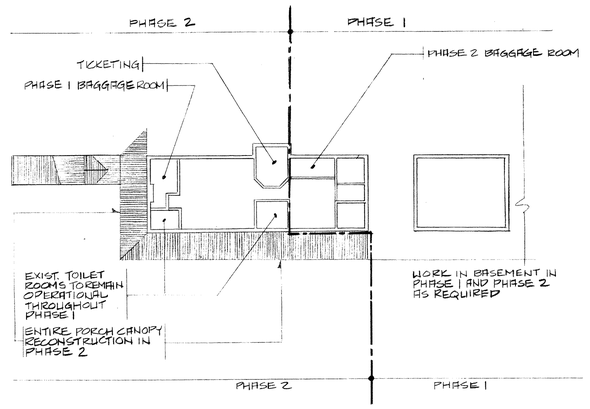
o:\dgn\vre\vrelec2.dnt Mon Mar 4 12:42:59 1996
Mon Mar 4 12:42:34 1996 O:\BYERS\QUEUE\VERS5.acf O:\PRF5\VREELEC2.PRF



1 / D1.1 DEMOLITION PLAN - BASEMENT LEVEL

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

BUILDING NORTH



2 / D1.1 CONSTRUCTION PHASING DIAGRAM

N.T.S.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
The Watkins Building, 642 N. Broad Street, Philadelphia, PA 19130, (215)235-3500, FAX (215)235-3530
53 Haddonfield Road, Suite 305, Cherry Hill, NJ 08002, (609)321-2000, FAX (609)321-2009
3711 Bisonnet, Suite 300, Houston, TX 77042, (713)789-3141, FAX (713)789-3052
1600 Duke Street, Suite 400, Alexandria, VA 22314, (703)683-1400, FAX (703)683-1662

PHR&A
Peters Harris Rast & Associates, P.C.
Engineers, Surveyors, Planners, Landscape Architects
3866 Main Street, PO Box 901, Fairfax, Virginia 22030, 703-273-6999, Fax 703-591-3980

CCS
Construction Cost Systems, Inc.
11166 Main Street, Suite 300, Fairfax, Virginia 22030, 703-591-2582, Fax 703-591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

DEMOLITION PLAN BASEMENT LEVEL

CONSTRUCTION PHASING DIAGRAM

SCALE	AS SHOWN
DRAWN	JC/CR
CHECKED	CR
APPROVED	HM
DATE	02/22/95

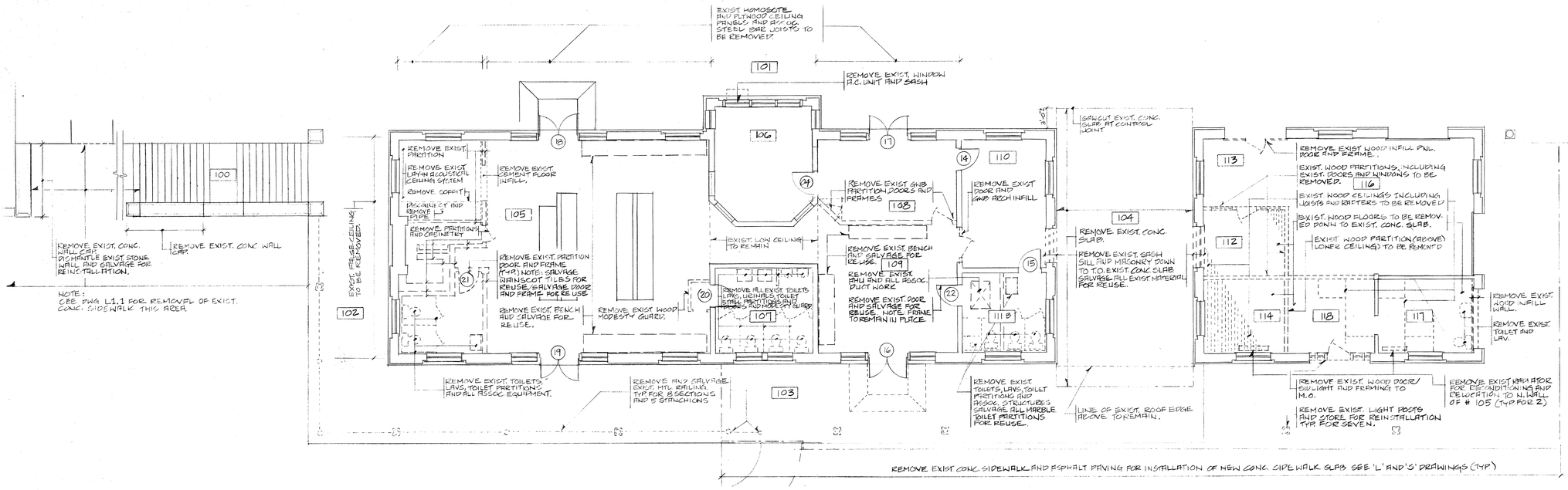
REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	REF. CLAIR.

DRAWING NO.

D1.1

11634



1 / D1.2 DEMOLITION PLAN - FIRST FLOOR

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

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662
☐ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)232-5500 FAX (215)235-3530
☐ 53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 3711 Briarpark Suite 300 Houston, TX 77042 (713)785-9141 FAX (713)789-3052

PHR&A
Peluso Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects
3898 Pell Ridge Drive, PO Box 901
Fairfax, Virginia 22030
703-273-6700 Fax 703-352-3989

Construction Cost Systems, Inc.
CCS
11108 Main Street Suite 220 Fairfax, Virginia 22030 703-691-2662 Fax 703-691-2400

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

DEMOLITION PLAN STATION LEVEL

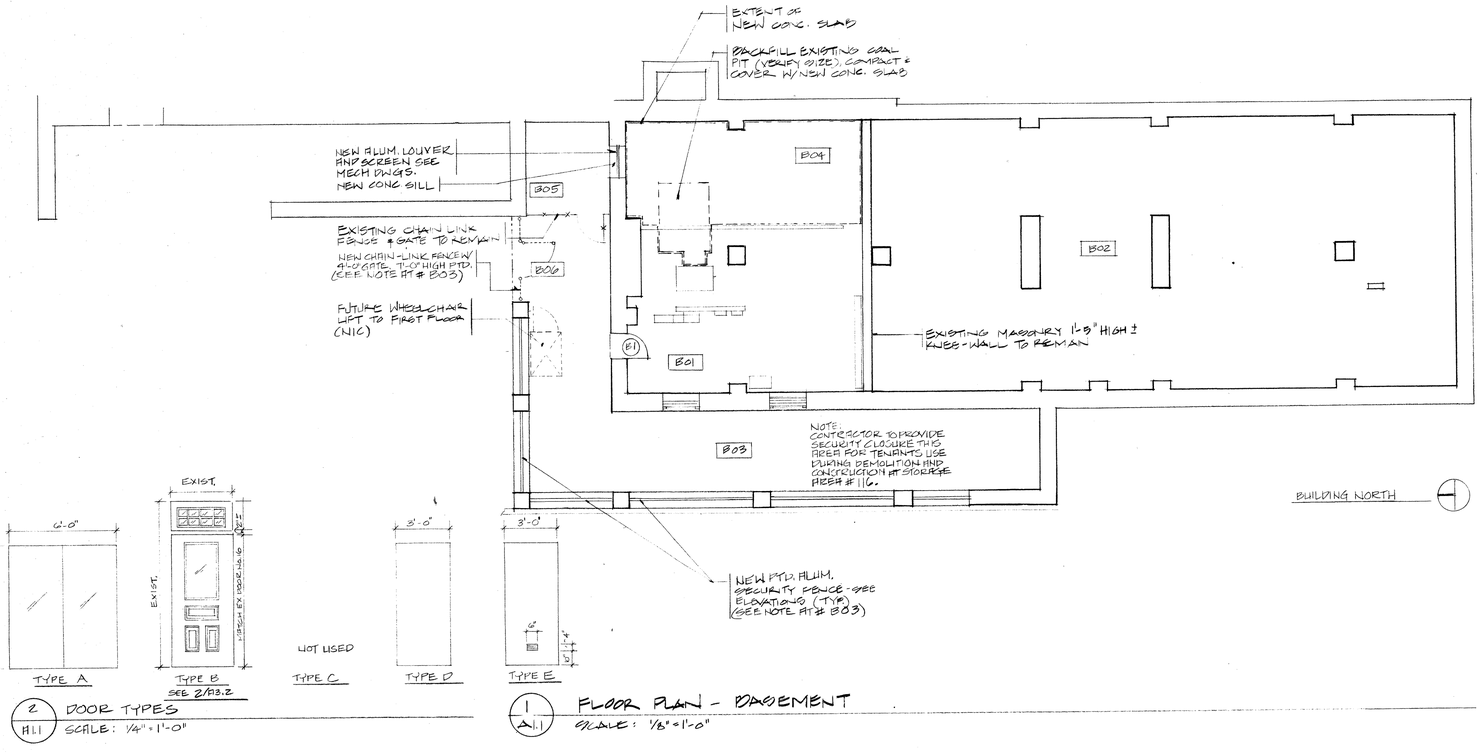
SCALE	AS SHOWN
DRAWN	JCCR
CHECKED	DD
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

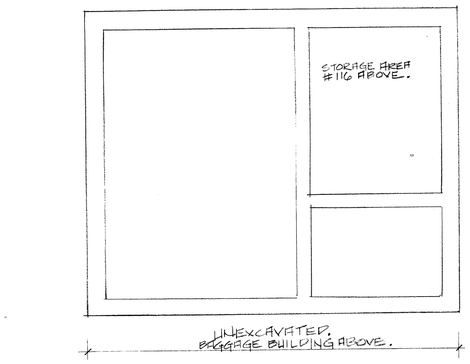
DRAWING NO.

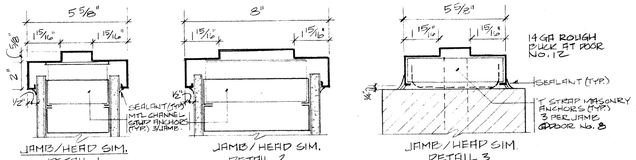
D1.2



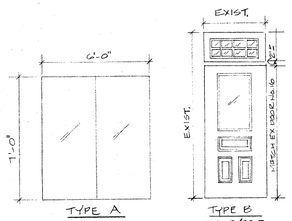
2 / A1.1 DOOR TYPES
SCALE: 1/4" = 1'-0"

1 / A1.1 FLOOR PLAN - BASEMENT
SCALE: 1/8" = 1'-0"





3 / A1.1 DOOR FRAME DETAILS
SCALE: 3" = 1'-0"



DOOR AND HARDWARE SCHEDULE

DOOR No.	TYPE	NOMINAL SIZE W	H	T	MAT.	FIN.	GL	FRAME TYPE	WALL TYPE	DETAILS JB	HD	THR	MAT	FIN	HARDWARE PIVOTS/HINGES	CLOSER	LATCH SET/ LOCK SET	DEAD BOLT	PUSH	PULL	THRESHOLD	SILENCERS	KICKPLATE	STOPS	NOTES
01	A	3-0	7-0	1/2		GL			GL						VIR 9206 (2)	DORMA BTS 80		VIR 351.3 (2)	VIR 1¼" HORIZ. 28"	VIR 1½" VERT 12"	625A ZERO			VIR 920T (TRANSOM)	
02	A	3-0	7-0	1/2		GL			GL						VIR 9206 (2)	"		"	"	"	"			"	
03	B	EX	EX	1¾		WD	NAT	PNL	EX/NEW FRP	EX M.	EX/NEW FRP	EX/ACOUSTY	MARBLE	WD	PT	MEN TRANSOM	HAGER BB1199/5X5/US32D			BEST M/E2141(181M)	MATCH EXIST.	MATCH EXIST.	MARBLE			HAGER 260F	SEE DETAIL 2/A3.2
04	EX																								
05	D	3-0	7-0	1¾		HM	PT		HM	GWB	1	1		HM	PT	HAGER BB191/4.5X4.5/US32D	DORMA C41 STH			BEST M/E2141(181M)	HAGER 305 4"x16"	HAGER 33J/3J	MARBLE	FS 133 7A (3)	HAGER 1985 10"x34½"	HAGER 241F
06	D	3-0	7-0	1¾		HM	PT		"	"	"	"		"	"	"	"			"	"	"	"	" (2)	"	"
07	D	3-0	7-0	1¾		HM	PT		"	"	"	"		"	"	"	"	BEST 93K/A8 (LEVER)						FS 133 7A (3)	" (2)	"
08	D	3-0	7-0	1¾		HM	PT		"	CMU	3	3		"	"	"	"	" / G (LEVER)				625A ZERO		FS 133 7A (3)	" (2)	HAGER 237W
09	E	3-0	7-0	1¾		HM	PT		"	GWB	1	1		"	"	"	"	" / D (LEVER)						FS 133 7A (3)	" (1)	"
10																										
11	E	3-0	7-0	1¾		HM	PT		"	"	"	"		"	"	"	"	" / L (LEVER)				REGL EDGE STRIP		FS 133 7A (3)	" (2)	"
12																										
13	D	3-0	7-0	1¾		HM	PT		"	GWB	1	1		"	"	"	"	" / R (LEVER)				REGL EDGE STRIP		FS 133 7A (3)	" (2)	"
14	EX	EX	EX	EX		WD	NAT		EX	EX M	EX	EX		WD	EX										NEW TRANSOM TO MATCH EXIST AT DOOR NO. 20	
15	EX	EX	EX	EX		WD	NAT		EX	EX M	EX	EX		WD	EX	EX					MATCH EXIST FOR STYLE & FIN W/NEW ADA APPROVED				FIX CLOSED	
16	EX															DORMA 641 STH (2)									NOTE: PROVIDE UNIT PRICE TO STRIP AND REFINISH 4 PR EXIST DOORS. 16, 17, 18, 19 (SEE NOTES ON A1.2)	
17	EX																								
18	EX																								
19	EX																								
20	EX	EX	EX	EX		WD	PT		EX	EX M.	EX	EX		WD	PT	EX		EX								
21	EX	EX	EX	EX		HM	PT		EX	EX M.	EX	EX	EX	HM	PT	EX		EX								

NOTE:
PRODUCTS LISTED IN THE HARDWARE SCHEDULE ABOVE HAVE BEEN SELECTED TO ESTABLISH QUALITY, DESIGN AND FUNCTION. FURNISH THE PRODUCTS INDICATED OR THE NEAREST APPROVED PRODUCT(S) FROM ALTERNATE MANUFACTURERS THAT ARE EQUAL TO THE PRODUCT(S) OF THE INDICATED MFGR.

KEY OF INDICATED MANUFACTURERS:
FS: FEDERAL SPECIFICATION NO
BEST: BEST LOCK CORP., INDIANAPOLIS, IN
DORMA: DORMA DOOR CONTROLS, INC., REAMSTOWN, PA
HAGER: HAGER HINGE CO., ST LOUIS, MO
VIR: VIRGINIA GLASS PRODUCTS CORP., MARTINSVILLE, VA
ZERO: ZERO INTERNATIONAL INC., NEW YORK, NY

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
The Wallace Building, 642 N. Broad Street, Philadelphia, PA 19130, (215)235-3500, FAX (215)235-3530
53 Haddonfield Road, Suite 306, Cherry Hill, NJ 08002, (609)321-2000, FAX (609)321-2009
3711 Bridgeport, Suite 300, Houston, TX 77042, (713)789-9141, FAX (713)789-3052
1600 Duke Street, Suite 400, Alexandria, VA 22314, (703)683-1600, FAX (703)683-1662

PHR&A
Paxton Harris Raatt & Associates, PC
Engineers, Surveyors, Planners
Suite 200, 3998 Fair Ridge Drive, PO Box 801
Fairfax, Virginia 22030
(703)352-1300 FAX (703)352-3863

CCS
Construction Cost Systems, Inc.
11166 Main Street, Suite 200, Fairfax, Virginia 22030, (703)591-2626 FAX (703)591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF
ALEXANDRIA UNION STATION
FOR
THE CITY OF ALEXANDRIA, VIRGINIA

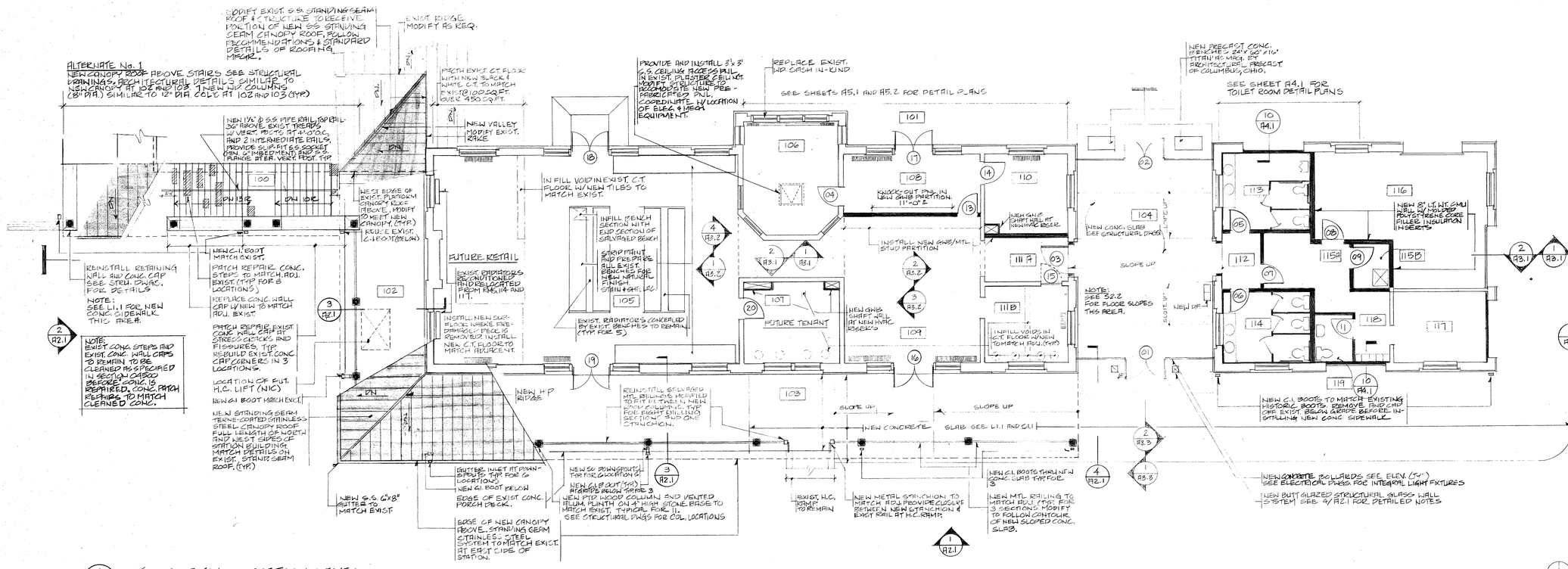
DRAWING TITLE
FLOOR PLAN BASEMENT
DOOR TYPES
DOOR FRAME DETAILS
DOOR AND FINISH HARDWARE SCHEDULE

SCALE	AS SHOWN
DRAWN	CR
CHECKED	CR
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
A1.1



1 / A1.2 FLOOR PLAN - STATION LEVEL
SCALE: 1/8" = 1'-0"

3 / A3.1 DIAGRAM PLAN OF DUMPSTER ENCLOSURE
SCALE: 1/8" = 1'-0"
(SEE L1.1 FOR LOCATION)

PROVIDE SCREEN FENCE SYSTEM OF INTERLOCKING 25 GAUGE STEEL (GALVANIZED) BOARDS 6' HIGH WITH 3"x8 POSTS (12 GAUGE WALL THICKNESS) W/ U CHANNEL RAILS 1½"x 1⅝" CAST FINIALS AND ALL ATTACHMENT BRACKETS RINGS, FASTENERS ETC. TO MAKE A COMPLETE ENCLOSURE SYSTEM. PROVIDE "ATTLEBORO" STYLE AS MANUFACTURED BY "MONUMENTAL IRON WORKS OF BALTIMORE, MD." OR EQUAL

SUBMIT COLOR SAMPLES OF ACTUAL COATING ON METAL TO ARCHITECT FOR CHOICE OF MFGR'S STANDARD COLOR.

ROOM FINISH SCHEDULE

ROOM No.	ROOM NAME	FLOOR MATERIAL	FLOOR FINISH	BASE MATERIAL	BASE FINISH	WINDOWS AND FRAMES MATERIAL	WINDOWS AND FRAMES FINISH	DOORS MATERIAL	DOORS FINISH	DOOR FRAMES MATERIAL	DOOR FRAMES FINISH	CEILINGS MATERIAL	CEILINGS FINISH	CEILINGS FINISHED HEIGHT	WALLS NORTH MATERIAL	WALLS NORTH FINISH	WALLS EAST MATERIAL	WALLS EAST FINISH	WALLS SOUTH MATERIAL	WALLS SOUTH FINISH	WALLS WEST MATERIAL	WALLS WEST FINISH	REMARKS
B01	MECHANICAL	EX CONC.	EX.			WD. EX	PT.	HM EX	PT.	HM EX	PT	EX. WD.	EX.	EX	EX. STONE	EX	EX WD.	EX	EX STONE	EX	EX STONE	EX	BROOM CLEAN
B02	BASEMENT	SOIL	EX									EX WD.	EX.	VARIES	"	"	EX. STONE	"	"	"	"	"	REMOVE DEBRIS.
B03	AREAWAY (WEST)	EX CONC.	EX			WD. EX	PT.					EX CONC	EX.	EX	ALUM FEN	PT	EX. STONE	EX	EX STONE	EX	ALUM FEN	PT	FOR TENANT USE
B04	MECHANICAL	NEW CONC.	BROOM FIN			MTL LOUVER	PT					EX WD	EX	EX	EX STONE	EX	EX. STONE	EX	EX STONE	EX	EX WD		BROOM CLEAN
B05	MECHANICAL	EX CONC.	EX			MTL LOUVER	PT.					EX CONC	EX.	EX	"	"	"	"	"	"	EX CL FEN	PT.	BROOM CLEAN
B06	AREAWAY NORTH	EX CONC.	EX					HM EX	PT.	HM. EX	PT.	"	"	EX	ALICL FEN	PT	EX CL FEN.	PT	EX STONE	EX	ALUM. FEN.	PT.	BROOM CLEAN
100	ALT NO.1 STAIR CANOPY	EX. CONC.	REPAIR IN KIND (BASE)	COLS.	STONE							B.D. BD (ALT.)	PT (ALT.)	VARIES (ALT.)	COL/SPDRL	PTD WD	COLS/SPDRL	PTD WD	COLS/SPDRL	PTD WD	COLS/SPDRL	PTD WD	ROOF/STG SM. TCS (ALT. NO.1)
101	PORCH CANOPY (EAST)	EX. CONC.	EX	COLS (EX)	STONE (EX)	EX WD	PT.	EX WD	EX	EX WD	PT.	EX WD	EX.	EX.	COL S (EX)	PTD WD	COLS. (EX)	PTD WD	COLS (EX)	PTD WD	EX. MASON	PATCH PAINT	MODIFY ROOF @ NORTH
102	PORCH CANOPY (NORTH)	EX. CONC.	EX.	COLS	STONE	EX. WD	PT.					BD. BD	PT.	(2'-0"-15'-6") ±	COL/SPDRL	PTD WD	COL/SPDRL	PTD WD	EX. MASON.	PATCH PAINT	COLS/SPDRL	PTD WD	ROOF/STG SM. TCS. (BASE)
103	" " (WEST)	EX + NEW CONC	MATCH EX	COLS.	STONE	EX WD	PT.	EX WD	EX	EX WD	PT	BD. BD	PT	(12'-0"-15'-6") ±	COLS/SPDRL	PTD WD	EX MASON.	PATCH PAINT	COL /SPDRL	PTD WD	COLS/SPDRL	PTD. WD.	" " " "
104	BREEZEWAY	CONC.	NON-SLIP AGGREGATE			EX. WD.	PT.	WDPNL/GL	MATCH EX/GL	WD. EX/NEW	PT	EX. WD.	EX.	EX	EX MASON.	CLN/PATCH PT	GL/GWB SOF.	GL/PT	EX. MASON	CLN/PATCH PT	GL/GWB SOF.	GL/PT.	CONC. SEALER ON FLOOR
105	WAITING ROOM/FLT. REPAIR	EX/NEW CMT.	EX/NEW CMT	EX MASON.	PT.	EX. WD.	PT.	EX. WD	EX	EX WD	PT	EX WD	REST. FIN.	(10'-6" - 30'-6") ±	EX MASON.	PT.	EX MASON.	PT.	EX MASON	PT.	EX MASON	PT.	PATCH REPAIR AT REMOVALS (TYP)
106	TICKET OFFICE	NIC	NIC	NIC	NIC	EX WD. (NAT.)	REST. FIN	NIC	NIC	NIC	NIC	EX. REC.T.	MODIFY	EX	NIC	NIC	NIC	NIC	NIC	NIC	NIC	NIC.	MOD CLG. FOR TEMP HVAC HOOK-UP
107	FUTURE TENANT	EX. CMT.	EX (PATCH REPAIR)	EX MASON	PT	EX WD	PT	EX WD	PT	EX WD	PT	EX. PL.	PT	EX	EX MAS/GWB	PT	EX MAS/GWB	PT	EX MASON.	PT	EX MAS/GWB	PT	EX MASON.	PT.	
108	BAGGAGE ROOM	EX. V.T.	RES. TILE	EX. M/ VCT	PT / VCT	EX WD (NAT)	REST. FIN.	EX WD	EX	EX WD (NAT)	REST. FIN.				EX MAS/GWB	PT	EX MASON.	PT	EX MASON	PT	NEW GWB	PT.	NO CEILING SEE 109
109	BAGGAGE LOBBY	EX CMT	EX	EX M/ WD	PT/PT	EX WD	PT	EX WD	EX	EX WD	PT	EX WD	REST. FIN	(10'-6" - 30'-6") ±	EX MASON	PT	NEW GWB	PT	EX MASON.	PT	EX MASON	PT.	PATCH REPAIR AT REMOVALS (TYP)
110	STATION MASTER	EX. CMT	EX	EX MASON	PT	EX WD (NAT)	REST. FIN.	EX WD	REST. FIN.	EX WD (NAT.)	REST. FIN.	EX PL	PT	EX	EX MAS/GWB	PT	EX MASON	PT	NEW GWB	PT	EX MASON	PT.	
111A	HALL (NORTH)	EX. C.M.T.	EX (PATCH REPAIR)	EX MAS/WD	PT			WD/GL/PNL	MATCH EX	EX/NEW WD	PT	EX PL	PT	EX	EX MASON.	PT	NEW GWB	PT	EX MASON	PT	EX MASON	PT.	
111B	VENDING	EX C.M.T.	EX (PATCH REPAIR)	EX MAS/WD	PT	EX WD (NAT)	REST. FIN	EX WD (NAT.)	REST FIN.	EX WD/VAY/PT	REST FIN./PT	EX PL	PT	EX	EX MASON.	PT.	EX MASON	PT	EX MASON	PT	EX MASON	PT.	PATCH REPAIR AT REMOVALS (TYP)
112	HALL (SOUTH)	CONC.	NON-SLIP AGGREGATE	WD	PT			HM	PT	HM	PT	GWB	PT	10'-1" ± (10'-1" ± 30'-1")	EX MASON.	PT	NEW GWB	PT	NEW GWB	PT	NEW GWB	PT	CONC. SEALER ON FLOOR
113	MEN'S TOILET ROOM	CONC.	NEW C.MT.	NEW CT		EX WD	PT	HM	PT	HM	PT	GWB	PT	10'-1" ±	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	
114	WOMEN'S TOILET ROOM	CONC.	NEW C.MT	NEW CT		EX WD	PT	HM	PT	HM	PT	GWB	PT	10'-1" ±	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	C.T.W/GWB	- / PT	
115A	EMPLOYEE'S HALL	CONC.	NON-SLIP AGGREGATE	WD	PT			HM	PT	HM	PT	GWB	PT	10'-1" ±	GWB	PT	CMU	PT	GWB	PT	GWB	PT	CONC. SEALER ON FLOOR
115B	JANITOR CLOSET	CONC.	" " "	WD	PT			HM	PT	HM	PT	GWB	PT	10'-1" ±	GWB	PT	CMU	PT	CMU	PT	GWB	PT	" " " "
116	TENANT STORAGE	EX CONC	EX			EX WD		HM	PT	HM	PT	EX WD		EX	CMU	PT	EX MASON.	EX	EX MASON	EX	CMU/EX MAS	PT / EX	
117	EMPLOYEE'S OFFICE	CONC.	NON-SLIP AGGREGATE	WD	PT	EX WD	PT	HM	PT	HM	PT	GWB	PT	10'-1" ±	EX MASON	PT	EX MASON.	PT	GWB	PT	EX MASON	PT	CONC. SEALER ON FLOOR
118	EMPLOYEE'S LOCKERS	CONC.	" " "	WD	PT			HM	PT	HM	PT	GWB	PT	10'-1" ±	GWB	PT	GWB	PT	EX MASON	PT	GWB	PT	" " " "
119	EMPLOYEE'S TOILET RM.	CONC.	NEW RES. TILE	VCT				HM	PT	HM	PT	GWB	PT	10'-1" ±	GWB	PT	GWB	PT	GWB	PT	GWB	PT	

NOTE: NO OPEN FLAMES MAY BE USED FOR PAINT OR VARNISH REMOVAL - CHEMICAL STRIPPING AGENTS MUST BE APPROVED BY THE CITY OF ALEXANDRIA.

NOTE: AS AN ALTERNATE, PROVIDE UNIT PRICE TO STRIP PAINT FROM AND REFINISH ALL HISTORIC WOOD WORK THAT IS CURRENTLY PAINTED, TO MATCH EXIST NAT FIN./ PER DOOR, WINDOW, FRAME ETC.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)923-2760 FAX (215)235-3530
☐ 53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 3711 Bridgepark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662

PHR+A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects
3600 Pender Drive, PO Box 901
Fairfax, Virginia 22030
(703)359-9500 FAX (703)359-3883

CCS
Construction Cost Systems, Inc.
11260 Main Street Suite 203 Fairfax, Virginia 22030 (703)591-2626 FAX (703)591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
FLOOR PLAN STATION LEVEL
ROOM FINISH SCHEDULE

SCALE AS NOTED
DRAWN JC/CR
CHECKED CR
APPROVED HM
DATE 06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
A1.2

NOTE:
CLEAN EXIST. STONE WALLS IN VECINITY OF CONC. STAIRS USING THE MOST GENTLE MEANS POSSIBLE. BEFORE ATTEMPTING WATER APPLICATION METHOD REMOVE AS MUCH OF HARDENED CALCIUM DEPOSITS AS POSSIBLE (USING CARE NOT TO DAMAGE HISTORIC STONE FABRIC) WITH HAND TOOLS. NEXT ATTEMPT TO REMOVE AS MUCH OF CALCIUM AND RUST STAIN AS POSSIBLE USING WATER APPLICATION METHODS. IF WATER METHODS PROVE INADEQUATE THEN PROCEED W/CHEMICAL METHODS AS DESCRIBED IN THE SPECIFICATIONS SECTION 04500. PROVIDE MIN. 3'x3' TEST PAN. OF EACH CLEANING METHOD FOR REVIEW BY THE ARCHITECT & OWNER, BEFORE PROCEEDING W/ THE WORK.

NOTE: FOR FILT. No 3 - EXIST. ELEC. CONDUIT ON W'EST. F.O. EXIST. STONE WALL TO BE RELOCATED BY OTHERS.

NEW STG SEAM TCS ROOF SYSTEM (TO MATCH EXIST.) ON NEW PTD WD. PORCH CANOPY (TYP.) SEE DETAIL 3/A2.1 TYP.

NEW SS COUNTER FLASHING IN NEW REGLET FLUSH W/INSIDE OF EXIST. CONC. PLATFORM SLAB AND TO EXIST STONE WALL.

4/A2.1 OPP. HAND SIM.

NEW 4"x 8" S.S. GUTTERS AND DOWNSPOUTS TO MATCH EXIST. (TYP.) AS REQ. TO PROVIDE COMPLETE ROOF DRAIN.

3/A2.1 SIM.

REPLACE MISSING OR ROTTED WD. TRIM PIECES (TYP.)

REPLACE ASPHALT SHINGLE ROOFING/INSULATION/UNDERLAYMENT ETC. IN-KIND AND TO MATCH EXIST. AFTER REMOVAL OF EXIST. VTR.

AT ALL DORMER CHEEK WALLS: REMOVE EXIST. ASPHALT SHINGLES AND UNDERLAYMENT, INSTALL NEW BUCKINGHAM SLATE S/CO MATCH DIMENSIONS OF SAMPLE PROVIDED BY OWNER) W/ COPPER ROOFING NAILS OVER 30lb FELT UNDERLAYMENT. (TYP FOR 14 CHEEK WALLS

NEW PLUMBING VTRS. TO BE COMBINED IN ONE ROOF PENETRATION LOCATED ON THE EAST SLOPE OF THE EXIST. BAGGAGE BUILDING ROOF EXPOSED VENT AND BOOT TO BE PAINTED TO MATCH COLOR OF EXIST. SHINGLE ROOF/PITCH REPAIR ROOF AS REQ. TO MATCH EXIST.

3/A2.1

4/A2.1

1/A3.3

2/A3.3

NEW S.S. DOWNSPOUTS ELBOWS AND WALL STRAPS TO REPLACE EXIST. MTL. DOWNSPOUTS. RELOCATE AS SHOWN TYP FOR 2 AT WEST FACE OF BAGGAGE BLDG.

NEW PTD C.I. BOOTS CONNECT TO NEW STORM WATER LATERAL UNDER NEW CONC. SIDEWALK. (TYP FOR 2 AT WEST FACE OF BAGGAGE BUILDING

MODIFY EXIST DOWNSPOUTS TO DRAIN ONTO NEW S.S. ROOF (TYP FOR 3) MATCH EXIST.

9'-0"

14'-0"

NEW CONCRETE BOLLARDS (2) 1'-0" Ø x 3'-0" H SET IN NEW CONC. SLAB/MATCH REPL. EXIST. GRANITE. CORNERS FOR TAPE AND FINISH. BOLLARDS TO BE EQUIPPED W/LIGHT FIXTURES (SEE ELEC. DWGS.) SEE S2.1 FOR MOUNTING

PAINTED WD SIDING W/MAX. 2½" EXPOSURE MIN. EXIST. MASONRY OPENING TYPICAL FOR 3 OPENINGS.

NEW PAINTED ALUM. SECURITY RAIL W/ ½" SQUARE POSTS @ 4" O.C. VERTICALLY AND ⅝" SQUARE TOP + BOTTOM RAILS. SET IN EXIST'G STONE PERIM. (TYP. @ BASEMENT)

NEW SS DOWNSPOUTS (TYP)

NEW C.I. BOOTS (TYP)

REMOVE EXIST. DOWN SPOUT AFTER MODIFICATION AND PLUG HOLES IN EXIST. CONC. SLAB (TYP FOR 2)

WIDTH OF EXIST'G RAMP

PROVIDE NEW 3'-6" HIGH PAINTED ALUM. GUARD RAIL W/ ½" SQUARE VERTICAL POSTS @ 4" O.C. AND 2"x¼" SQ. TOP + BTTM. HORIZONTALS. TIE INTO COLUMNS, MATCH ADJACENT EXIST. RAIL.

NEW HC. RAMP @ EA. SIDE OF DOOR

EXTENT OF NEW STRUCTURAL SLAB & WALL AT EAST SIDE OF EXIST. WAY

EXTENT OF ALT. #1 NEW PORTICO/CANOPY AT STAIRS. SEE STRUCTURAL DWGS.

NOTE:
ALL ARCHITECTURAL WOODWORK FOR ALTERNATE No. 1 SHALL BE SIMILAR TO THAT SHOWN FOR THE BASE CONTRACT ON DETAILS 3 AND 4 ON SHEET A2.101

EXTENT OF NEW PORTICO/CANOPY W/ NEW STANDING SEAM TCS ROOF (MATCH EXIST SS DETAILS.)

1/A2.1 WEST ELEVATION
1/8" = 1'-0"

EXTENT OF NEW PORTICO/CANOPY ROOF AT NORTH ELEVATION

AT JUNCTURE OF NEW AND EXIST. TCS STG SEAM ROOF AT N.E. CORNER/ INSTALL ALL NEW COUNTER FLASHING CORNER OF ONE SINGLE PIECE. MODIFY EXIST. AS REQ'D. LEADS TO BE MIN. 1'-4" LONG.

NEW SS RIDGE AT JUNCTION OF NEW TCS ROOF W/MODIFIED EXIST. ROOF SRVCE AT N.E. CORNER

NEW STG SEAM TCS ROOF SYSTEM ON NEW PTD W/ PORCH CANOPY (TYP.) SEE DETAIL 3/A2.01 (TYP.)

SEE 4/A2.1 FOR GABLE END DETAIL - SIM.

STAIRS BEYOND

SEE NOTE ABOVE AT DETAIL 1/A2.1 FOR WORK ON EXIST. STONE WALLS AS PART OF ALT. No. 1

ALTERNATE No. 1
NEW CANOPY ROOF AT STAIRS SEE STRUCTURAL DRAWINGS FOR FRAMING AND EXTENT. STANDING SEAM TCS ROOF USING MFGR'S DETAILS. ARCHITECT. USE WD TRIM SIM TO 3&4 ON 01 (TYP) NEW PREFABRICATED WD COLUMNS 6'-8" DIA. SIM. TO EXIST. 12" (TYP)

REUSE EXIST C.I. BOOT

NEW C.I. BOOT (TYP)

NEW PTD CHAIN-LINK FENCE 7'-0" HIGH W/ 4'-0" WIDE GATE W/ LOCKABLE LATCH.

2/A2.1 NORTH ELEVATION
1/8" = 1'-0"

CONTINUOUS SEALANT

NEW SS COUNTER FLASH. CONTINUES IN REGLE. MATCH EXIST. DETAILS

NEW STANDING SEAM TCS ROOF SYSTEM ON ROOF SIZED PURLIN ON SOLID FELT ON ¾" PLYWD. ON ¾" T&G BEARED BD. (TYP)

CUT NEW REGLET INTO EXIST. MASONRY UNIT. PROVIDE COUNTER FLASHING. MATCH EXIST. DETAILS

NEW RAFTER POCKETS IN EXIST. BRICK WALL SEE STRUCTURAL DWGS

NEW WD LEDGER BETWEEN POCKETED RAFTERS. SEE STRUCTURAL DWGS.

EMERGENCY REMOTE BATTERY PACK FIXTURES SEE PAGE 2.2 SHOWN HERE FOR LOCATION ONLY

MATCH EXIST.

¾" S.S. WRAPPED BD. CEILING (TYP.)

CONTINUOUS TCS FRIEZE EDGE

CONTINUOUS S.S. GUTTER W/ DOWN SPOUTS AT 30'-0" (MAX) MATCH EXIST. (TYP.)

MATCH EXIST. SCROLL WK. AT REPEATS EVERY (TYP.) BLEWNDOX # 22 TIP

S.S. DRAINSPOUT HANGERS TO MATCH EXIST. (TYP.) ATTACH TO COLUMNS W/SS. FASTENERS

¾" PTD. PLYWD FASCIA (TYP.) ENTIRE UNITS OVER COLS.

NOTE: PVC VENT. VENTILATION PIPES-SEE (TYP.) (SEE STRUCTURAL DWGS.)

EQ. EXIST. BRICK BUILDING

¾ HM TS BED MOULD (TYP.)

1"x TRIM BDS. (TYP.)

NEW PREFABRICATED FRP WD COLUMNS TO MATCH EXISTING (10'-2" DIA./ 2'-8" DIA.) TYP.

HEIGHT VARIES

NEW PTD C.I. BOOT, CONNECT EXIST. STORM DRAIN SYSTEM. TYP. FOR 5.

MODIFY EXIST. END/OR PROVIDE NEW MTL. GUARD RAIL (TYP.) 3'-6" HT. W/ VERT. POSTS 1/2" Ø AT 4'-0" O.C. OF BOT. RAIL 3/8" Ø AT 1'-0" MIN. 3" EMB. IN CONC. AND MIN. 2 HTL. C/S FASTENERS TO COL'S EACH END/EACH SECTION

NEW TRAFFIC SEALANT AT EDGE OF NEW STONE PLINTH (TYP.)

NOTE: SEE NOTES AT DETAIL 4/A2.1

3/A2.1 SECTION THROUGH CANOPY
1/2" = 1'-0"

EXIST. HEAVY TIMBER BEAM (TYP.)

NEW S.S RAKE TO MATCH EXIST.

EXIST. ROOF RAFTERS

NEW GWB ON MTL. STUD SOFFIT (TYP.)

NEW STEEL STRUCTURE TO SUPPORT STRUCTURAL GLASS WALL SYSTEM SEE STRUCTURAL DWGS. (TYP.)

NEW ROOF ANGLE AT HEAD OF NEW CANTILEVERED STRUCTURAL GLASS MULLIONS (BEYOND) TYP.

NEW 2 POINT SUSPENSION HANGERS FOR CANTILEVERED STRUCTURAL GLASS MULLIONS (BEYOND) TYP.

TOP CANTILEVERED STRUCTURAL GLASS MULLIONS (BEYOND) (TYP.)

11"x" SS CHANNEL JOINTS AT JUNCTURE OF GL. WALL W/ EXIST BRICK WALL SEE VIGNETTE DETAIL C-12

S.S. PERIMETER PERCH PLATE ANGLE AT EXIST. BRICK JUNCTION W/NEW STRUCTURAL GLASS WALL (TYP.)

SS TRANSOM SILL TIE UNIT W/ FIN BRACKET @ 5'-0" O.C. (TYP.)

D/C TEMPERED PANES AND 8.0 MULLION (BEYOND) (TYP.)

NEW STRUCTURAL GLASS WALL SYSTEM DESIGN & ENGINEERING BY SYSTEM MANUFACTURER TO INCLUDE COMPLETE SYSTEM OF SUSPENDED ¾" TEMPERED AND HEAT SOAKED W/GLASS MULLIONS, SUSPENDED FROM ROOF. DOORS TO BE 2 PRS OF 3'-0"x7'-0" ¾" TEMPERED AND HEAT SOAKED GLASS W/ PATCH TYPE TOP CORNER PIVOTS. BOTTOMS TO HAVE PIVOT PATCH IN WELL OF CONT. RAIL W/SPRING LOCK PATCH AND HEAD CENTER STOP PATCH. INCLUDE CONCEALED-IN-FLOOR CLOSERS VERT 4 HORIZ. PUSH/PULLS ON BOTH SIDES EACH DOOR LEAF. ALL MTL. PARTS to BE S.S. & COMPLY W/ALL FIRE REQUIREMENTS. (TYP.)

NOTE: DO NOT ALTER EXIST. BRICK QUOINS LOCATE HINGE DESIGNED CONCEALED GLASS WALL SYSTEM SO THAT ANY MODIFICATION OF THE EXIST. BRICK WALL REQUIRED TO ACCOMPLISH THE STRUCTURAL GLASS WALL SYSTEM DOES NOT CAUSE ANY ALTERATION OF THE EXIST. QUOINS OR THE DECORATIVE MASONRY WINDOW SURROUNDS.

NEW VENTED ALUM PLINTH (BASE) c. 12"x¼" ø ATTACHED DOWELS. (TYP.)

NEW STONE PLINTH (TYP.) SEE STRUCTURAL DWGS.

TRAFFIC SEALANT & PREMOLDED JOINT FILLER TYP.

NEW SOLVENT-REPAIR FLOOR DOOR CLOSER (SIMILAR TO BTS 80 (TYP.)

T'-0" (FROM MID) (BEYOND)

CONTINUOUS EXPOSED SS RESTRAINING BOX (TYP.)

NEW 4" CONC. RADIANT HEAT SLAB ON 1" RIGID INSULATION ON COMPACTED FILL (TYP.)

5" SLAB

NEW CONC. FOOTING SEE STRUCTURAL DWGS.

NEW 1" PERIMETER RIGID INSULATION FULL DEPTH AT NEW CONC. FOOTINGS

NOTE: SEE ALL NOTES AT DETAIL 3/A2.1

4/A2.1 SOUTH END ELEVATION & DETAIL SECTION THRU NEW GLASS WALL
1/2" = 1'-0"

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN ☐
☐ The Watergate Building, 600 Pote Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1602
☐ 51 Haddonfield Road Suite 300 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 2121 Eisenhower Ave. Suite 305 Alexandria, VA 22314 (703)739-9141 FAX (703)739-9142
☐ 642 N. Broad Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
☐ 5711 Bridgerock Houston, TX 77042 (713)789-9141 FAX (713)789-3052

PHR+A
Platner Harris Rand & Associates, pc
Engineers Surveyors, Planners
Landscape Architects
3866 Mt. Vernon Avenue
Alexandria, Virginia 22305
703-739-9700 Fax 703-684-3886

CCS
Construction Cost Systems, Inc.
13466 Main Street
Suite 100
Fairfax, Virginia 22030
703-591-2884 Fax 703-591-9489

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

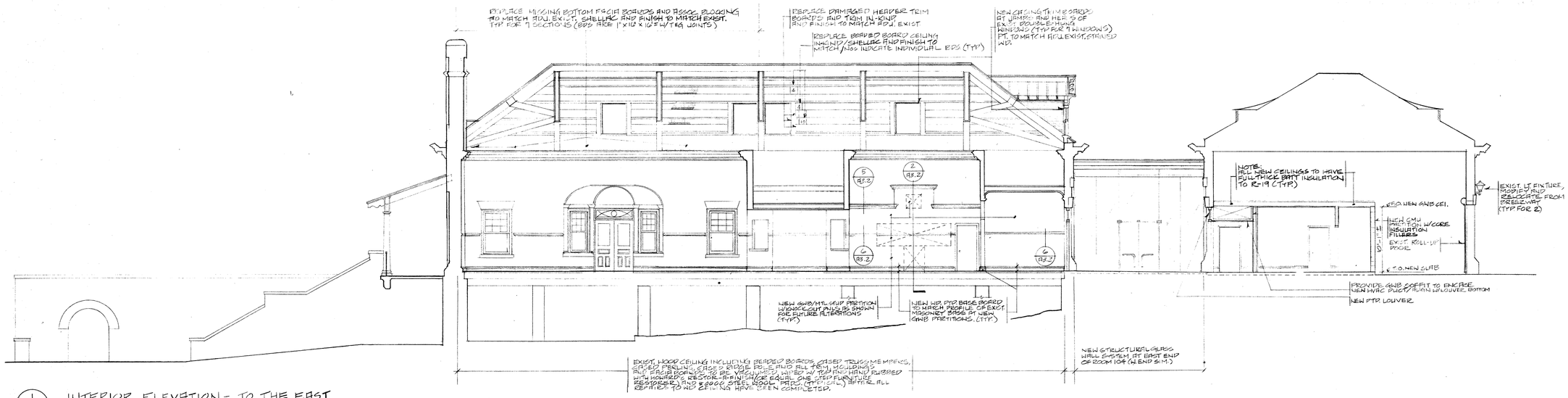
DRAWING TITLE
BUILDING ELEVATIONS DETAILS

SCALE	AS SHOWN
DRAWN	JC/CR
CHECKED	CE
APPROVED	HM
DATE	06/26/95

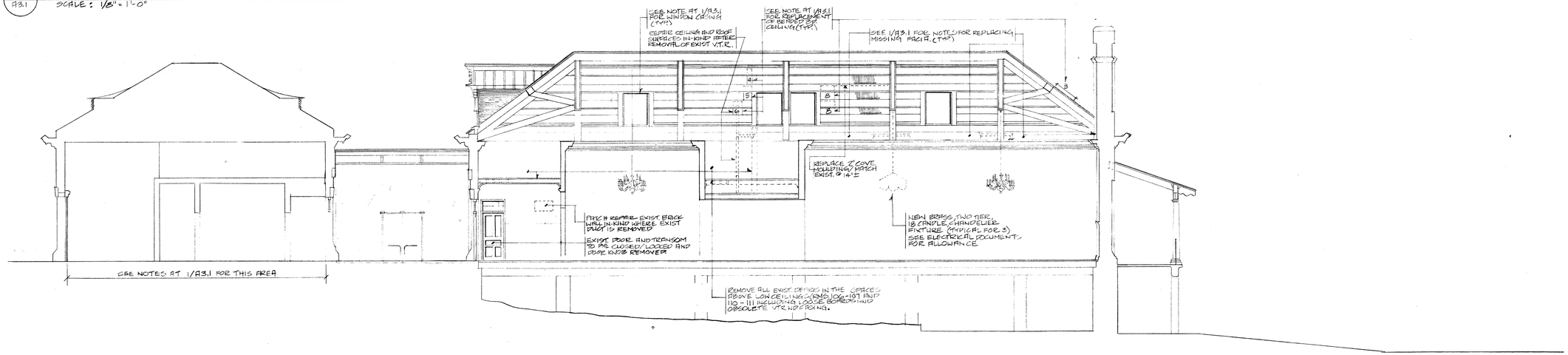
REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
A2.1



1 / A3.1 INTERIOR ELEVATION - TO THE EAST
SCALE: 1/8" = 1'-0"



2 / A3.1 INTERIOR ELEVATION - TO THE WEST
SCALE: 1/8" = 1'-0"

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
The Willis Building, 642 N. Broad Street, Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
53 Hadonfield Road Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
3711 Bronpark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
1600 Duke Street Suite 640 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662
PHR&A
Peter Harnik, Post & Associates, PC Economic Surveyors, Planners 3600 Wisconsin Avenue, NW Washington, DC 20016 202-966-6660
P.O. Box 801 Palmyra, Virginia 22963 703-292-8700 Fax 703-292-3882
Construction Cost Systems, Inc. CCS
1100 Main Street Suite 200 Buffalo, New York 14203 716-881-2600 Fax 716-881-2400

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

INTERIOR BUILDING ELEVATIONS

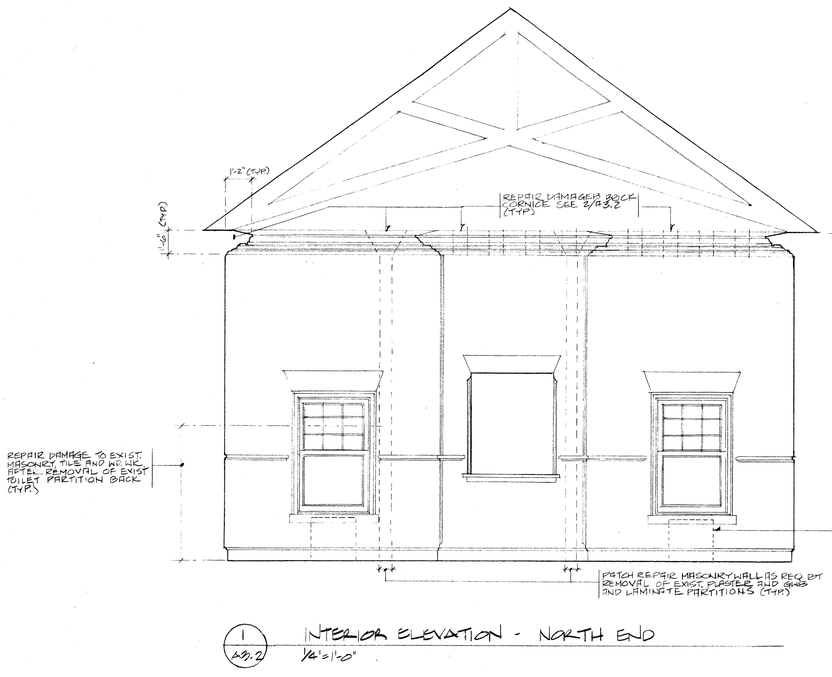
SCALE	AS SHOWN
DRAWN	JC/CR
CHECKED	CR
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	DOOR SEAL

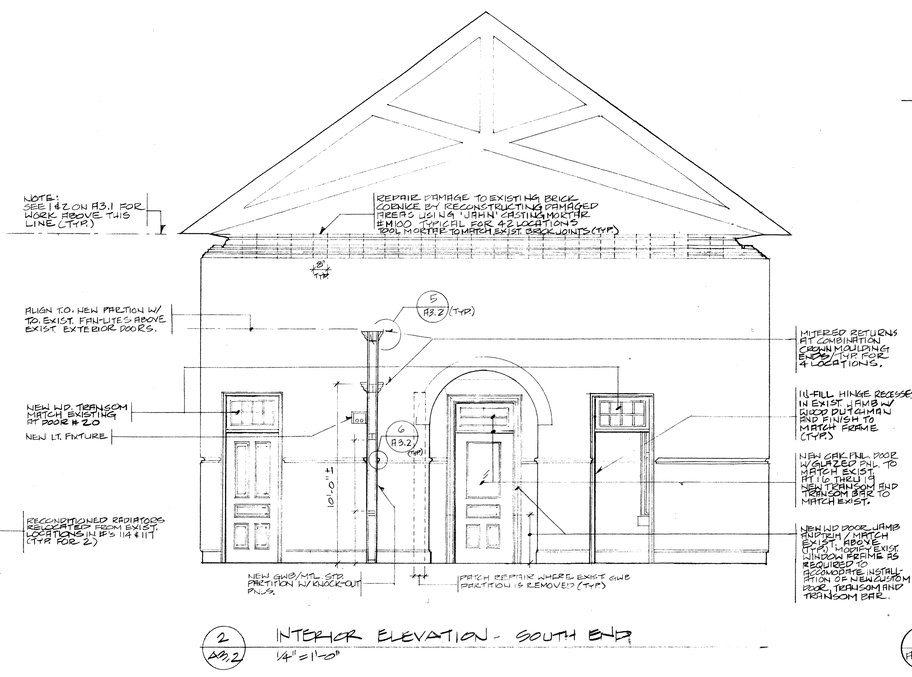
DRAWING NO.

A3.1



1 / A3.2 INTERIOR ELEVATION - NORTH END

1/4"=1'-0"

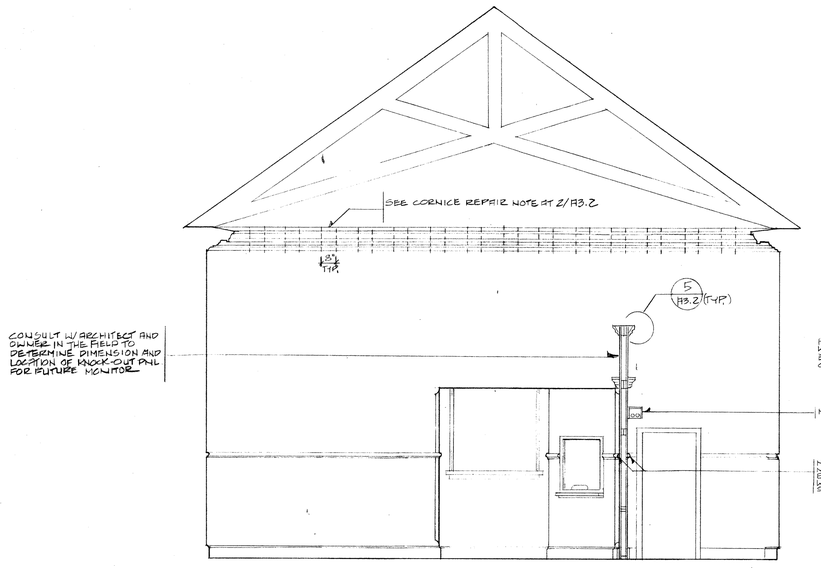


2 / A3.2 INTERIOR ELEVATION - SOUTH END

1/4"=1'-0"

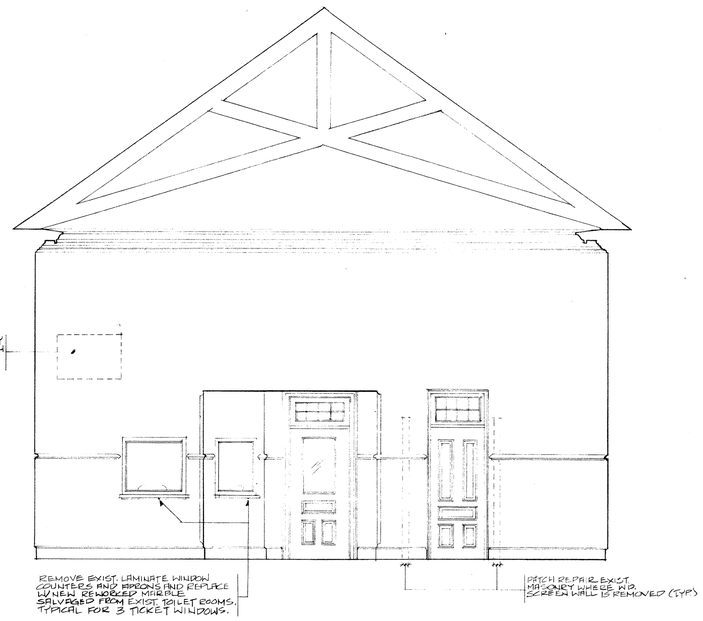
5 / A3.2 COMBINATION CROWN MOULDING (WD.)

FULL SIZE



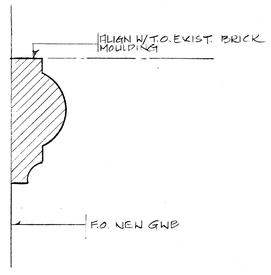
11 / A3.2 INTERIOR ELEVATION - NORTH CENTRAL

1/4"=1'-0"



4 / A3.2 INTERIOR ELEVATION - SOUTH CENTRAL

1/4"=1'-0"



6 / A3.2 PANEL MOULD (R-42) (WD)

FULL SIZE

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
The Wallace Building 42 S. 15th Street Philadelphia, PA 19102 (215)235-5500 FAX (215)235-3530
53 Haddonfield Road Suite 390 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
3711 Briarpark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1682

PHR&A
Patrice Harris Rust & Associates, PC Historic Preservation Landscape Architects 1108 King Street, PO Box 201 Alexandria, Virginia 22313 Fax: 703-683-3983
Fairfax: 703-934-8700 Fax: 703-352-3983

Construction Cost Systems, Inc. CCS
11166 Main Street Suite 200 Fairfax, Virginia 22030 703-691-2662 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

INTERIOR ELEVATIONS

DETAILS

SCALE	AS SHOWN
DRAWN	JC/CR
CHECKED	CR
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	MONITOR

DRAWING NO.

A3.2



1 A3.3 NORTH ELEVATION - BREEZWAY

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



2 A3.3 SOUTH ELEVATION - BREEZWAY

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

VITETTA GROUP

ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN

☐ The Vitetta Building 8 53 Haddonfield Road Suite 1010 Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3520

☐ 3711 Briarpark Suite 200 Houston, TX 77042 (713)789-9141 FAX (713)789-3052

☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662

PHR&A

Pallas Harris Rast & Associates, PC Economic Development Landscape Architects 2000 Belle View Blvd, PO Box 801 Alexandria, Virginia 22308 703-329-8700 Fax 703-360-3883

Construction Cost Systems, Inc. C|C|S

11166 Main Street Suite 200 Fairfax, Virginia 22030 703-591-2662 Fax 703-591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

INTERIOR BREEZEWAY ELEVATIONS

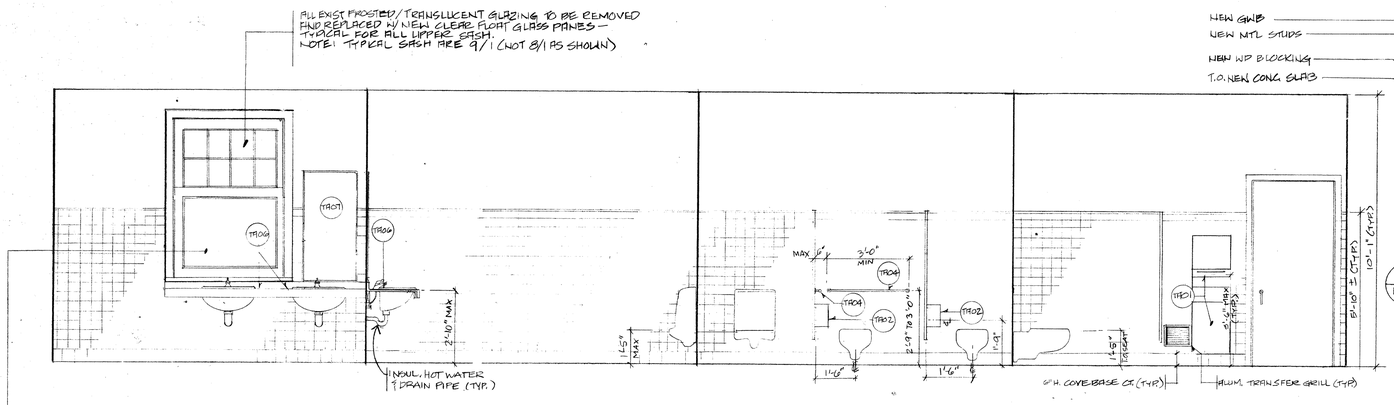
SCALE	AS SHOWN
DRAWN	JC/CR
CHECKED	CR
APPROVED	HM
DATE	02/22/95

REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	GLAZING

DRAWING NO.

A3.3



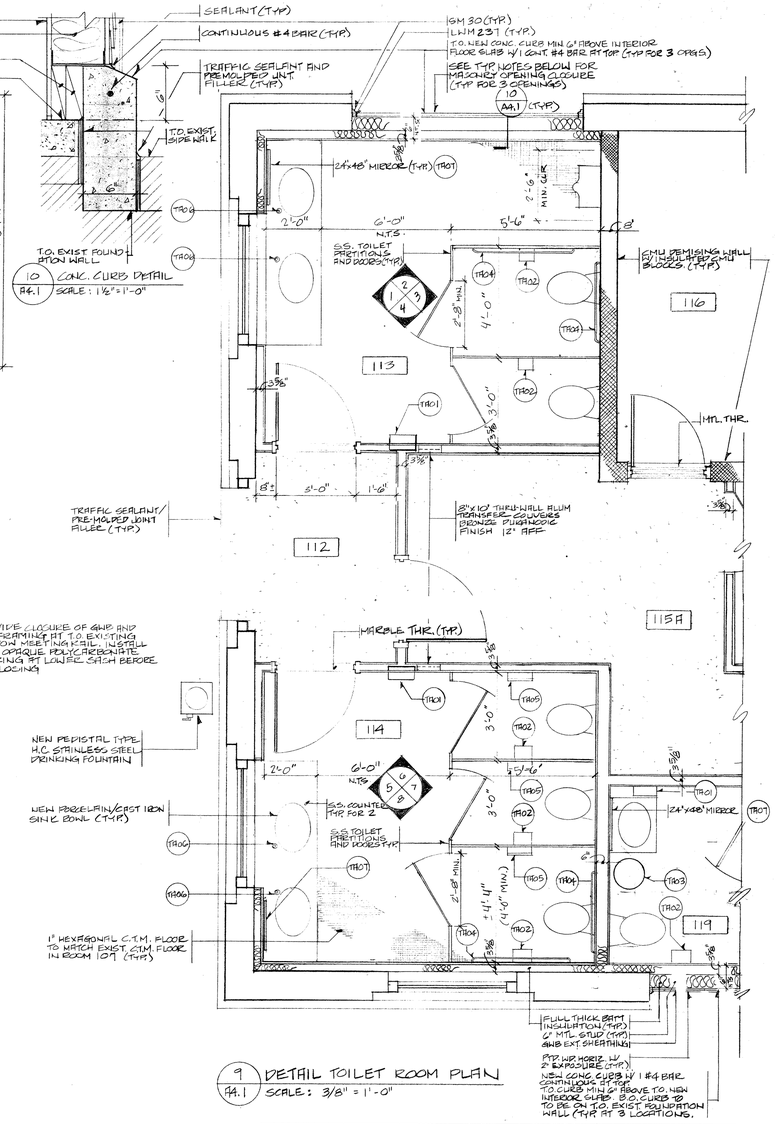
1 / A4.1 ROOM 113 NORTH
SCALE: 3/8" = 1'-0"

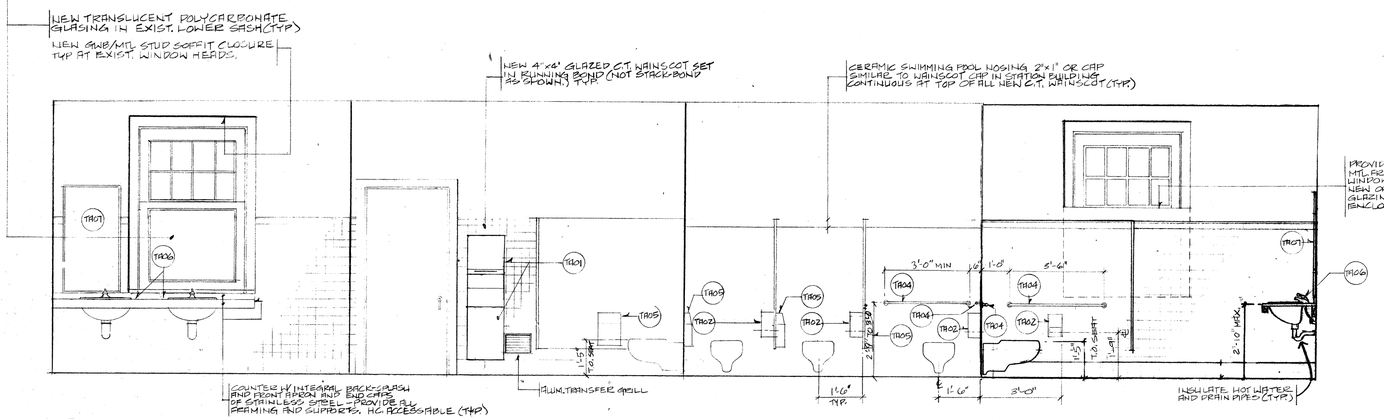
2 / A4.1 ROOM 113 EAST
SCALE: 3/8" = 1'-0"

3 / A4.1 ROOM 113 SOUTH
SCALE: 3/8" = 1'-0"

4 / A4.1 ROOM 113 WEST
SCALE: 3/8" = 1'-0"

10 / A4.1 CONC. CURB DETAIL
SCALE: 1½" = 1'-0"





5 / A4.1 ROOM 114 NORTH
SCALE: 3/8" = 1'-0"

6 / A4.1 ROOM 114 EAST
SCALE: 3/8" = 1'-0"

7 / A4.1 ROOM 114 SOUTH
SCALE: 3/8" = 1'-0"

8 / A4.1 ROOM 114 WEST
SCALE: 3/8" = 1'-0"

PROVIDE CLOSURES OF GWB AND MTL FRAMING AT T.O. EXISTING WINDOW MEETING RAIL. INSTALL NEW OPAQUE POLYCARBONATE GLAZING AT LOWER SASH BEFORE INFILLING

9 / A4.1 DETAIL TOILET ROOM PLAN
SCALE: 3/8" = 1'-0"

TOILET ACCESSORY SCHEDULE

NOTATION NO.	ACCESSORY TYPE	REFERENCE PRODUCT
TA-01	PAPER TOWEL DISPENSER AND WASTE RECEPTACLE SEMI-RECESSED	B-3942
TA-02	**TOILET TISSUE DISPENSERS:** ROLL-IN-RESERVE DISPENSER SURFACE MOUNTED	B-288
TA-03	NOT USED	NOT USED
TA-04	**GRAB BARS:** GRAB BAR, MEDIUM DUTY	B-5806 SERIES
TA-05	**SANITARY NAPKIN DISPOSALS:** SANITARY NAPKIN DISPOSAL, SURFACE MOUNTED	B-254
TA-06	**SOAP DISPENSERS:** SOAP DISPENSER, DECK MOUNTED LIQUID FORM	B-822
TA-07	**MIRROR UNITS:** STANDARD STAINLESS STEEL FRAMED MIRROR UNITS	B-165 SERIES, 2448

REFERENCE PRODUCT:
THE TOILET ACCESSORY SCHEDULE INCLUDES THE CATAOLOG OR MODEL NUMBER OF BOBRICK WASHROOM EQUIPMENT, INC., WHICH IS THE STANDARD OF QUALITY REQUIRED FOR THE PROJECT. PROVIDE THESE OR COMPARABLE PRODUCTS OF APPROVED MANUFACTURERS THAT MEET OR EXCEED THE QUALITY OF THE REFERENCE PRODUCT.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
The Wilson Building, 842 N. Broad Street, Philadelphia, PA 19130, (215)235-3300
53 Hadonfield Road Suite 306, Cherry Hill, NJ 08002, (609)321-2000
1717 Dunwoody Suite 300, Houston, TX 77042, (713)789-9141
1420 Duke Street Suite 402, Alexandria, VA 22314, (703)683-6000
PHR&A — Patton Harris Rust & Associates, pc, Engineers, Surveyors, Planners, Landscape Architects, 3998 Fair Ridge Drive, Fairfax, Virginia 22033
Construction Cost Systems Inc. CCS — 11128 Main Street Suite 205, Fairfax, Virginia 22030

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF
ALEXANDRIA UNION STATION
FOR
THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
TOILET ROOM DETAIL PLAN
DETAIL ELEVATIONS
SCHEDULES

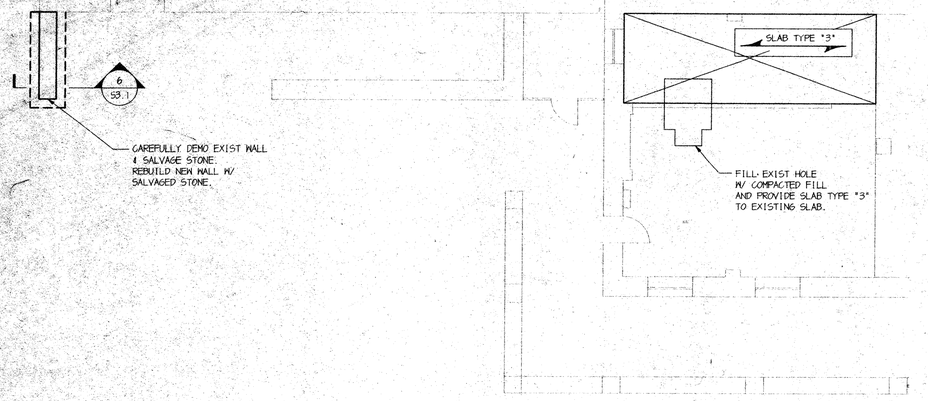
SCALE	AS SHOWN
DRAWN	LK/CR
CHECKED	CR
APPROVED	HM
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION
	11/03/95	SLOPING SINK

DRAWING NO.
A4.1

19 of 38



1
92.1 PARTIAL FOUNDATION PLAN

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

SLAB TYPES:

SG-1. SLAB TYPE "1" : 4" CONCRETE SLAB ON GRADE REINF. WITH 6x6-W2.1xW2.1 W.M.F. OVER 4" DRAINAGE FILL, VAPOR BARRIER AND 1 INCH R16ID INSULATION WITH RADIANT HEAT PIPING. COORDINATE RADIANT HEAT PIPING WITH DIV 15 CONTRACTOR.

SG-2. SLAB TYPE "2" : 4" LIGHT WEIGHT CONCRETE SLAB REINF. W/ 6x6 - W2.1xW2.1 W.M.F. OVER EXISTING CONCRETE SLAB.

SG-3. SLAB TYPE "3" : 5" CONCRETE SLAB ON GRADE REINF. WITH 6x6-W2.1xW2.1 W.M.F. OVER 4" DRAINAGE FILL AND VAPOR BARRIER.

DECK TYPES:

DD-1. DECK TYPE "1" : 3/4" PLYWOOD ROOF SHEATHING OVER 3/4" TONGUE AND GROOVE BEADED BOARD. SEE ARCH DWGS FOR BEADED BOARD SPECIFICATIONS.

DD-2. DECK TYPE "2" : 1/2" PLYWOOD ROOF SHEATHING

DESIGN LIVE LOADS:

ROOF = 30 PSF PLUS SNOW DRIFT WHERE APPLICABLE.
LOBBIES = 100 PSF.
ATTIC FLOOR = 20 PSF.

LATERAL LOADS
WIND LOADS PER 1993 BOCA (70 MPH, EXPOSURE C).
SEISMIC LOADS PER 1993 BOCA
SEISMIC HAZARD EXPOSURE GROUP "I".
SEISMIC PERFORMANCE CATEGORY "A".
EFFEC. PEAK ACCEL. COEF(Av) = 0.05 OR LESS

GENERAL NOTES:

G-1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

G-2. THE METHOD AND FREQUENCY OF ATTACHING MECHANICAL EQUIPMENT UNITS, ETC., TO THE STRUCTURAL ELEMENTS SHALL BE SUBJECT TO THE ENGINEER'S REVIEW.

G-3. REFER TO ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC. NOT SHOWN ON STRUCTURAL PLANS.

G-4. COORDINATE FRAMING FOR ROOF AND FLOOR OPENINGS AND MECHANICAL EQUIPMENT WITH DIVISION 15 CONTRACTOR. PROVIDE HEADER MEMBERS WHERE REQUIRED.

G-5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ETC., AND SHALL NOTIFY THE ARCHITECT OF ANY AND ALL DISCREPANCIES, ADDITIONAL INFORMATION, ETC., BEFORE BEGINNING THE WORK.

G-6. THE CONTRACTOR SHALL USE EXTREME CAUTION IN THE DEMOLITION OF EXISTING STRUCTURES. SUCH DEMOLITION SHALL BE PERFORMED IN SUCH A MANNER AS TO MAINTAIN THE STRUCTURAL INTEGRITY OF ALL EXISTING STRUCTURES TO REMAIN. PROVIDE TEMPORARY SHORING WHERE REQUIRED.

G-7. ALL STRUCTURAL WORK SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE CONTRACTOR SHALL ENGAGE AN EXPERIENCED, QUALIFIED INSPECTION AGENCY, SUBJECT TO THE REVIEW OF THE ARCHITECT, TO PERFORM ALL INSPECTION WORK, AS REQUIRED.

REINFORCED CONCRETE NOTES:

C-1. ALL REINFORCED CONCRETE WORK SHALL BE IN CONFORMANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318, LATEST EDITION) AND SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301, LATEST EDITION) OF THE AMERICAN CONCRETE INSTITUTE.

C-2. MINIMUM F'c REQUIRED AT 28 DAYS:
FOUNDATIONS.....3000 PSI.
INTERIOR SLABS.....3500 PSI.
EXTERIOR SLABS.....4000 PSI.

C-3. MAXIMUM WATER CEMENT RATIO:
FOUNDATIONS.....0.50.
INTERIOR SLABS.....0.45.
EXTERIOR SLABS.....0.40.

C-4. REINFORCEMENT
DEFORMED BARS.....ASTM A615, GRADE 60.
WELDED WIRE FABRIC.....ASTM A185.
EPOXY COATED REINFORCEMENT....ASTM A775.

C-5. ALL CEMENT CONFORMING TO ASTM C150, TYPE 1. MAXIMUM AGGREGATE SIZE SHALL BE 1-1/2" FOR FOOTINGS AND 3/4" FOR WALLS AND SLABS, CONFORMING TO ASTM C33.

C-6. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STIRRUPS OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.

C-7. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3/4" FOR SLABS, 1-1/2" FOR BEAMS AND 3/4" FOR WALLS. ALL EXTERIOR SLABS AND ALL CONCRETE EXPOSED TO WEATHER OR EARTH FILL SHALL HAVE MINIMUM CONCRETE COVER OF 2" FOR BARS LARGER THAN #5, 1-1/2" FOR #5 BARS OR SMALLER, AND 3" FOR ALL CONCRETE PLACED AGAINST EARTH. ALL WELDED WIRE MESH IS TO BE PLACED 1 INCH FROM TOP OF SLABS, TYPICAL.

C-8. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.

C-9. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT REINFORCEMENT SHOP DRAWINGS AND CONCRETE MIX DESIGN(S) PREPARED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF VIRGINIA TO THE ARCHITECT/ENGINEER FOR REVIEW.

C-10. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED INSPECTION AND TESTING AGENCY, SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER, TO PERFORM INSPECTION, SAMPLING AND TESTING ON THE CONCRETE AS FOLLOWS:
A) PRIOR TO CONCRETE PLACEMENT, INSPECT SIZE, LOCATION AND INSTALLATION OF REINFORCING STEEL FOR COMPLIANCE WITH ACI 318 AND CONTRACT DOCUMENTS.
B) SLUMP PER ASTM C143; ONE TEST FOR EACH SET OF TEST SPECIMENS
C) AIR CONTENT PER ASTM C173; ONE FOR EACH SET OF TEST SPECIMENS
D) COMPRESSION TEST SPECIMEN PER ASTM A31; ONE SET OF 5 CYLINDERS FOR EACH DAY'S POUR AND EVERY 25 CU. YD THEREAFTER.
E) COMPRESSIVE STRENGTH TESTS PER ASTM C39; 2 TESTS @ 7 DAYS, 2 TESTS @ 28 DAYS, ONE FOR RESERVE.

FOUNDATIONS NOTES:

F-1. SPREAD FOOTINGS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED SOIL OR PROPERLY COMPACTED FILL ASSUMING AN ALLOWABLE BEARING CAPACITY OF 2000 PSF.

F-2. ELEVATIONS SHOWN ON THE DRAWINGS AT WHICH FOUNDATIONS ARE TO BEAR ARE APPROXIMATE. MATERIAL ON WHICH FOUNDATIONS ARE TO BEAR SHALL HAVE AT LEAST THE ABOVE NOTED CAPACITY.

F-3. ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED GRADE.

F-4. THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND TAKE THE NECESSARY PRECAUTIONS TO INSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION.

F-5. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT, TO VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY.

MASONRY NOTES:

M-1. ALL MASONRY WORK SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1) OF THE AMERICAN CONCRETE INSTITUTE.

M-2. MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH OF MASONRY
WALLS F'm.....1500 PSI.
LINTELS F'm.....3000 PSI.

M-3. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S. ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I, LIME SHALL CONFORM TO ASTM C207, AND MASONRY CEMENT SHALL CONFORM TO ASTM C91.

M-4. CONCRETE BLOCK UNITS; SOLID AND HOLLOW LOAD BEARING UNITS PER ASTM C90, TYPE N-1, AS REQUIRED TO PROVIDE F'm AS NOTED. PROVIDE LIGHT

M-5. HORIZONTAL JOINT REINFORCING FOR ALL EXTERIOR AND LOAD BEARING WALLS SHALL BE TRUSS TYPE DUR-O-WALL OR EQUAL AS APPROVED BY THE ENGINEER, SPACED AT 16 INCHES CENTER TO CENTER, UNLESS NOTED OTHERWISE. PROVIDE ADDITIONAL LAYERS OF JOINT REINFORCEMENT IN THE FIRST TWO COURSES ABOVE AND BELOW A MASONRY OPENING. PROVIDE LAP AS RECOMMENDED BY MANUFACTURER WITH A MINIMUM OF 6".

COLD FORMED STEEL FRAMING

N-1. LIGHT-GAGE STEEL FRAMING MEMBERS AND CONNECTIONS SHALL CONFORM TO THE MOST CURRENT VERSION OF "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE.

N-2. STEEL USED IN THE MANUFACTURE SHALL BE HOT-DIPPED GALVANIZED STEEL, G-60 MINIMUM COATING WEIGHT AND SHALL CONFORM TO ASTM A446 GRADE D, MINIMUM YIELD POINT OF 50,000 PSI FOR 12, 14 AND 16 GAGE MEMBERS AND ASTM A446 GRADE A, MINIMUM YIELD POINT OF 33,000 PSI FOR 18 AND 20 GAGE MEMBERS.

N-3. ALL COLD FORMED STEEL STUDS FOR INTERIOR STUD WALL SHALL BE 3-5/8 INCH, 20 GAGE STEEL STUDS WITH THE FOLLOWING MINIMUM PROPERTIES: A= 0.264, I = 0.55, AND S = 0.303, SPACED AT 16" CENTERS TYPICALLY U.N.O. ALL CFS STUDS FOR EXTERIOR WALLS AND PLUMBING CHASE WALLS SHALL BE 6 INCH, 20 GAGE STEEL STUDS WITH THE FOLLOWING MINIMUM PROPERTIES A = 0.346, I = 01.793 AND S = 0.598, SPACED AT 16" CENTERS TYPICALLY U.N.O.

N-4. ALL COLD FORMED STEEL JOIST SHALL BE 8 INCH, 18 GAGE STEEL JOISTS WITH THE FOLLOWING MINIMUM PROPERTIES I = 5.247 AND S = 1.324.

N-5. PROVIDE STUD BRIDGING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR LATERALLY LOADED WALLS, BUT AT SPACING NOT TO EXCEED 4'-0 VERTICALLY.

N-6. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.

N-7. ALL FIELD CUTTING OF STUDS MUST BE DONE BE SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED MEMBERS IS UNACCEPTABLE.

N-8. NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR REVIEW BY STRUCTURAL ENGINEER AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).

N-9. PROVIDE DOUBLE STUDS, OR DOUBLE PAIRS OF STUDS WHERE APPLICABLE, AT THE JAMBS OF ALL DOOR AND WINDOW OPENINGS WHICH EXCEED 24 INCHES. A MINIMUM OF A STUD AND A TRACK SHALL BE PROVIDED AT ALL SILLS AND HEADS OF OPENINGS.

N-10. ONE ROW OF BRIDGING SHALL BE PROVIDED AT CENTER LINE OF JOIST SPAN. ALL BRIDGING SHALL BE 18 GAGE, 2 INCH WIDE STEEL STRAPS FASTENED TO BOTTOM FLANGE OF EACH JOIST AND TO ADJACENT END WALL.

N-11. NO LOAD SHALL BE APPLIED TO THE JOISTS UNTIL ALL BRIDGING HAS BEEN INSTALLED AND JOIST ENDS HAVE BEEN SECURED.

ADHESIVE ANCHORS

O-1. ALL ADHESIVE STUD ANCHORS SHALL BE "HVA ADHESIVE CONCRETE ANCHORS" AS MANUFACTURED BY HILTI FASTENING SYSTEMS, INC., OR "CHEM-STUD" AS MANUFACTURED BY THE RAWLPLUG COMPANY, INC.

O-2. ALL ADHESIVE ANCHORS SHALL CONSIST OF ALL-THREAD ROD, NUT, WASHER AND ADHESIVE CAPSULE. THE ALL-THREAD RD, WASHER AND NUT SHALL CONFORM TO AISI 304 STAINLESS STEEL. THE ADHESIVE CAPSULE SHALL CONTAIN A VINYLESTER RESIN.

O-2. THE SPACING, MINIMUM EMBEDMENT, AND INSTALLATION OF THE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES.

STRUCTURAL STEEL

S-1. ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (1989 EDITION, AS REVISED) OF THE AISC.

S-2. GRADE OF STEEL.....ASTM A36.

S-3. GALVANIZED STRUCTURAL STEEL
a. STRUCTURAL SHAPES .....ASTM A123.
b. BOLTS.....ASTM A153.

S-3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE, AWS D1.1, LATEST EDITION, OF THE AMERICAN WELDING SOCIETY. ELECTRODES SHALL BE E70XX FOR MANUAL ARC WELDING AND F7X-EXXX FOR SUBMERGED ARC WELDING.

S-4. PRIOR TO STEEL FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED TO PRACTICE IN THE STATE OF VIRGINIA TO THE ARCHITECT/ENGINEER FOR REVIEW.

STRUCTURAL LUMBER:

T-1. ALL STRUCTURAL LUMBER SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.

T-2. ALL STRUCTURAL LUMBER SHALL BE AS A MINIMUM NO. 2 GRADE SOUTHERN PINE SHALL HAVE AT LEAST THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES AND MODULES OF ELASTICITY AT A MAXIMUM MOISTURE CONTENT OF 19%:
Fb (BENDING).....975 PSI.
Fv (SHEAR).....90 PSI.
E.....1600000 PSI.
ALL LUMBER SHALL COMPLY WITH PS 20 "AMERICAN SOFTWOOD LUMBER STANDARD" AND WITH THE APPLICABLE RULE OF INSPECTION AGENCIES CERTIFIED BY AMERICAN LUMBER STANDARD. FACTORY MARK EACH PIECE OF LUMBER WITH GRADE STAMP OF INSPECTION AGENCY EVIDENCING COMPLIANCE WITH GRADING RULE REQUIREMENTS.

T-3. ALL "PARALLAM PSL" LUMBER SHALL BE CCA TREATED PARALLAM PSL LUMBER AS MANUFACTURED BY TRUS JOIST MACMILLAN WITH AT LEAST THE FOLLOWING MINIMUM DESIGN STRESSES:
Fb (BENDING).....2088 PSI.
Fv (SHEAR).....150 PSI.
E.....1,740,000 PSI.

T-3 NO CUTS, HOLES, OR GOPES REQUIRED FOR OTHER TRADES IN STRUCTURAL WOOD FRAMING WILL BE PERMITTED WITHOUT PRIOR REVIEW AND APPROVAL OF ENGINEER AND ARCHITECT.

T-4. PRESSURE TREAT WITH WATER-BORNE PRESERVATIVES ALL LUMBER WHICH MAY BE EXPOSED TO WEATHER OR EARTH; PRESSURE TREATMENT SHALL COMPLY WITH REQUIREMENTS OF AWPA STANDARDS C2 AND C9.

T-5. PROVIDE NAILING PATTERN IN COMPLIANCE WITH THE FOLLOWING FASTENING SCHEDULE WHEN JOINING TWO OR MORE FRAMING MEMBERS.
RAFTER TO PLATE.....3-8d COMMON TOE NAIL
RAFTER TO RIDGE.....2-16d COMMON FACE OR TOE NAIL
RAFTER TO CEILING JOIST.....4-10d COMMON FACE NAIL
BUILT-UP BEAM PLIES.....2-16d COMMON @ 12"c/c

T-6. ALL WOOD JOISTS AND RAFTER BEARING ENDS SHALL BE ANCHORED TO SUPPORT BEAMS WITH TYPE H32.5 OR H5 HURRICANE ANCHOR, AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC.

T-7. ALL WOOD JOIST OR HEADERS ENDS WHICH FRAME INTO BEAMS SHALL BE HUNG WITH GALVANIZED JOISTS HANGERS, AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., OR WITH APPROVED SUBSTITUTES WITH THE FOLLOWING WORKING LOAD CAPACITIES. PROVIDED SLOPED SEAT HANGERS AS REQUIRED.

JOIST SIZE	SIMPSON HANGER	LOAD CAPACITY
3.5X9.25	B310	2400 LBS
6.5X11.25	6BT	2400 LBS

T-8. STRUCTURAL STEEL PLATES, ANGLES, ETC., SHALL BE GALVANIZED STRUCTURAL STEEL PER ASTM A123. ALL BOLTS SHALL BE 5/8 INCH DIAMETER, GALVANIZED PER ASTM A153 U.N.O. WITH 2 WASHERS PER BOLT. PRIOR TO FABRICATION, CONTRACTOR TO SUBMIT SHOP DRAWINGS ON ALL MISCELLANEOUS METALS FOR REVIEW BY STRUCTURAL ENGINEER.

T-9. ALL WOOD COLUMNS SHALL BE ROUND TAPER COLUMNS WITH ARCHITECTURAL PROPORTIONS TO MATCH EXISTING COLUMNS WITH THE FOLLOWING VERTICAL LOAD CAPACITIES:
12 INCH DIAMETER = 5800 LB
8 INCH DIAMETER = 6800 LB
COLUMNS SHALL BE FABRICATED FROM PINE LUMBER WITH TONGUE AND GROOVE PRESSURE-GLUED (TYPE I WATERPROOF GLUE) JOINTS. PROVIDE SOLID WOOD CAPS AND BASES WITH VENTILATION HOLES. COLUMNS SHALL FACTORY PRIMED AND TREATED WITH WOOD PRESERVATIVE FOR EXTERIOR EXPOSURE. COLUMNS SHALL BE STORED, INSTALLED, VENTILATED AND PAINTED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. MANUFACTURER SHALL FURNISH A ONE-YEAR WARRANTY AGAINST MANUFACTURING DEFECTS AND JOINT SEPARATION. SUBMIT DATA AND SHOP DRAWINGS TO SHOW COLUMN REQUIREMENTS.

T-10. PRIME PAINT ALL EXPOSED LUMBER WITH ONE COAT PRIMER PRIOR TO INSTALLATION. PRIME PAINT ALL END AND CROSS CUTS AFTER CUTTING TO FINAL LENGTH.

PLYWOOD:

Y-1. ALL PLYWOOD SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATION AND SUPPLEMENTS OF THE AMERICAN PLYWOOD ASSOCIATION.

Y-2. ALL PLYWOOD ROOF SHEATHING SHALL BE 3/4" INCH "APA RATED SHEATHING", 48/24 SPACING, EXPOSURE 1. ALL PANELS SHALL BE NAILED WITH 12d COMMON NAILS AT 6 INCHES ON CENTER AT ALL ENDS AND EDGES AND AT 12 INCHES ON CENTER AT ALL INTERMEDIATE SUPPORTS.

Y-3. ALL PLYWOOD PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS. PROVIDE 1/8 INCH SPACE AT PANEL ENDS. CUT PANELS TO PROVIDE A MINIMUM OF TWO SPANS CONTINUOUS.

Y-4. ALL PLYWOOD CEILING SHEATHING SHALL BE 1/2 INCH "APA RATED SHEATHING", 32/16 SPACING, EXPOSURE 1. ALL PANELS SHALL BE SCREWED TO CFS JOISTS AT 6 INCHES AT ALL ENDS AND EDGES AND AT 12 INCHES ON CENTER AT ALL INTERMEDIATE SUPPORTS.

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)235-3530 FAX (215)235-3530
1600 Duke Street Suite 400 Alexandria, VA 22314 (703)739-3052 FAX (703)739-3052
53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)321-2099 FAX (609)321-2099
3711 Bridgepark Suite 300 Houston, TX 77042 (713)789-3052 FAX (713)789-3052
PHR&A Patton Harris Rust & Associates, pc Engineers Surveyors Planners 2808 Fair Ridge Drive Fairfax, VA 22031 703-573-5800 FAX 703-352-3865
CCS Construction Cost Systems, Inc. 11166 Main Street Suite 205 Fairfax, Virginia 22030 703-591-2662 FAX 703-591-2640

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
STRUCTURAL NOTES, PART. FOUNDATION PLAN

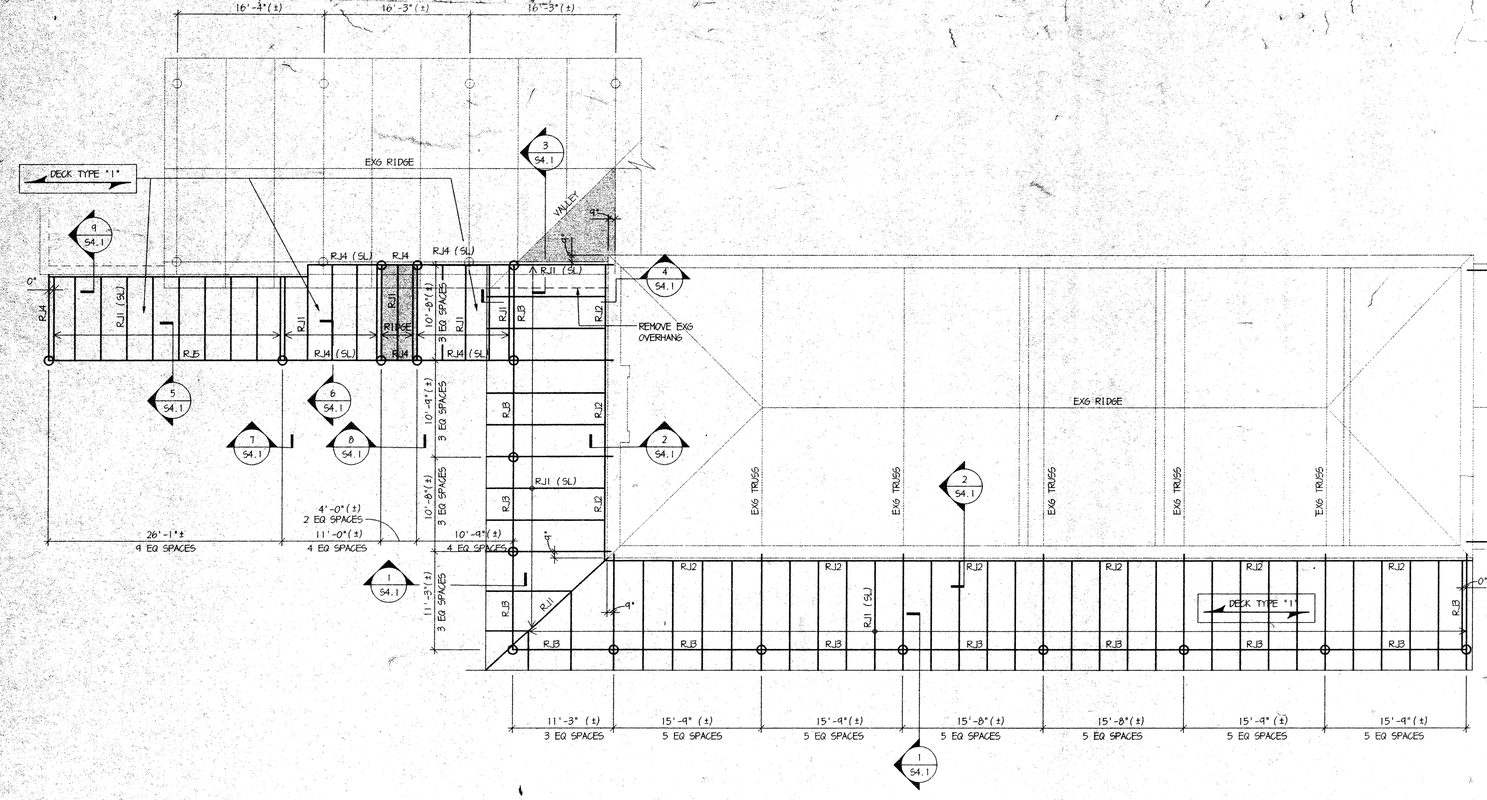
SCALE	AS SHOWN
DRAWN	JPE
CHECKED	TG
APPROVED	
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

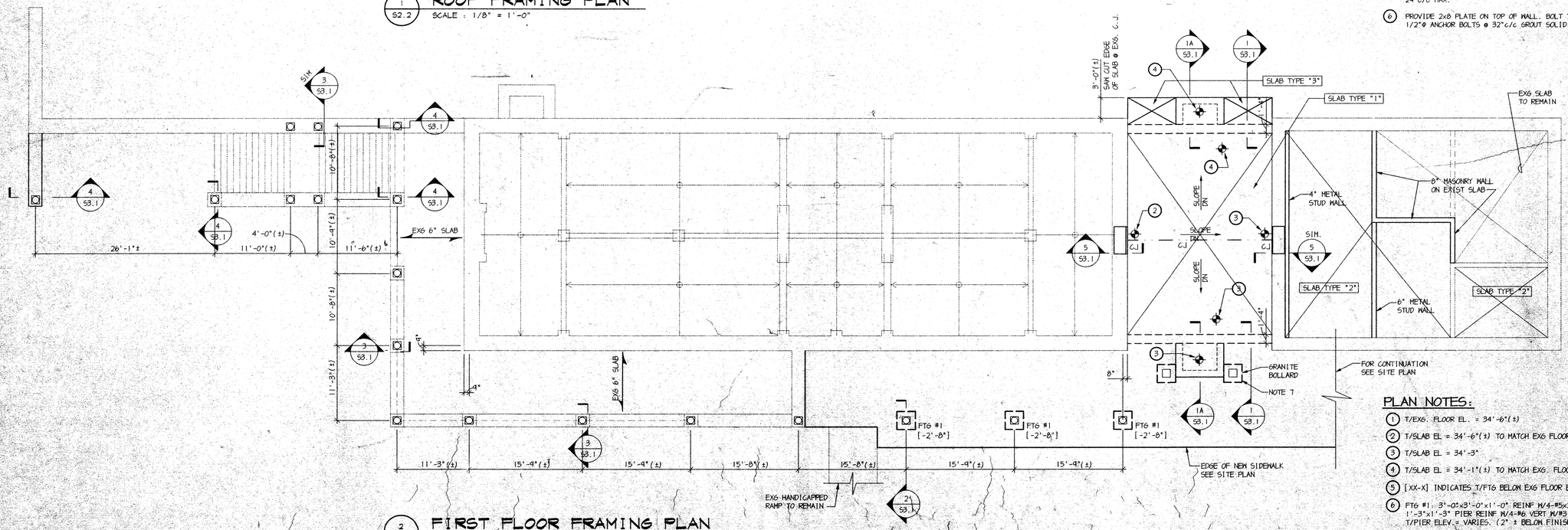
DRAWING NO.
S2.1

March 01, 1995 9:30:17 a.m.
Drawing: P:\PROJECTS\6096_00\S\6096S11.DWG
Xrefs: 6096TBLK.DWG



1 / 52.2 ROOF FRAMING PLAN

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



2 / 52.2 FIRST FLOOR FRAMING PLAN

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

PLAN NOTES:

1. RJ1 = 3 1/2" X 9 1/4" TREATED PARALLAM PSL
   RJ2 = 3 1/2" X 9 1/4" TREATED PARALLAM PSL
   RJ3 = 4 - 2" X 12" TREATED LUMBER
   RJ4 = 4 - 2" X 12" TREATED LUMBER
   RJ5 = 3 1/2" X 14" + 1 3/4" x 14" TREATED PARALLAM PSL
2. POCKET INTO EXIST BRICK MASONRY PATCH BRICK AROUND BEAM AFTER ERECTION.
3. 8J18 - 8" DEEP STEEL JOIST - 18 GAUGE
4. INDICATES AREA OF BUILT UP WOOD ROOF FRAMING OVER DECK BELOW W/ 2x8 @ 16"c/c AND 1/2" PLYWOOD DECK.
5. 2x10 LEDGER, BOLT TO WALL WITH 1/2"Φ EXP. ANCHORS @ 24"c/c MAX.
6. PROVIDE 2x8 PLATE ON TOP OF WALL. BOLT TO WALL WITH 1/2"Φ ANCHOR BOLTS @ 32"c/c GROUT SOLID.

PLAN NOTES:

1. T/EXG. FLOOR EL. = 34'-6"(±)
2. T/SLAB EL = 34'-6"(±) TO MATCH EXG FLOOR
3. T/SLAB EL = 34'-3"
4. T/SLAB EL = 34'-1"(±) TO MATCH EXG. FLOOR
5. [XX-X] INDICATES T/FTG BELOW EXG FLOOR EL = 34'-6"
6. FTG #1: 3'-0"x3'-0"x1'-0" REINF W/4-#5x2'-6" B.E.W. 1'-3"x1'-3" PIER REINF W/4-#6 VERT W/#3 TIES @ 8"c/c T/PIER ELEV. = VARIES. (2" ± BELOW FINISHED SLAB)
7. EXTEND GRANITE BOLLARD 2'-0" BELOW GRADE AND ENGAGE IN 6" CONC ON ALL SIDES AND BOTTOM. PROVIDE 4-#6 VERTICAL EACH CORNER ∉ #3 TIES @ 12"c/c

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wellpoint Building 642 N. Broad Street Philadelphia, PA 19130 (215)235-5300 FAX (215)235-3537
☐ 53 Maidenfield Road Suite 308 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2099
☐ 3711 Bellerive Suite 300 Houston, TX 77042 (713)781-9141 FAX (713)789-3052
☐ 1800 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1800 FAX (703)683-1801

PHR&A
Peter Rees Dahl & Associates, pc
Engineers, Surveyors, Planners.
3049 Fair Ridge Drive, PO Box 901
Suite 200 Fairfax, Virginia 22030
(703)-591-2626 Fax (703)-591-0810

CCS Construction Cost Systems, Inc.
1350 Main Street Suite 205 Rockville, Virginia 22030 (703)-591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

ROOF & 1ST. FRAMING PLANS

SCALE	1/8" = 1'-0"
DRAWN	JPE
CHECKED	TG
APPROVED	
DATE	06/26/95

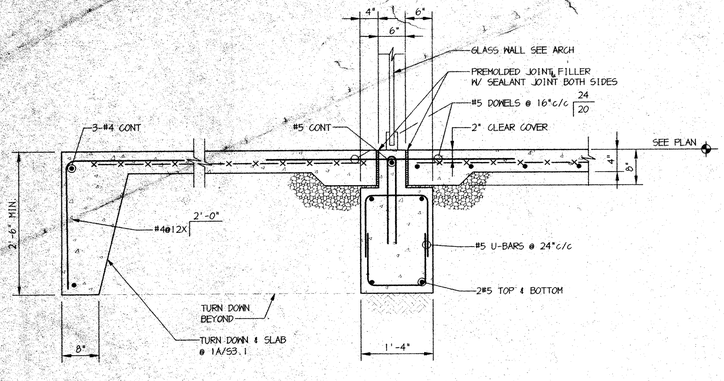
REVISIONS

STM.	DATE	DESCRIPTION

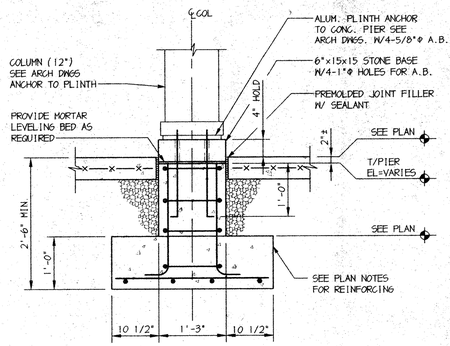
DRAWING NO.

S2.2

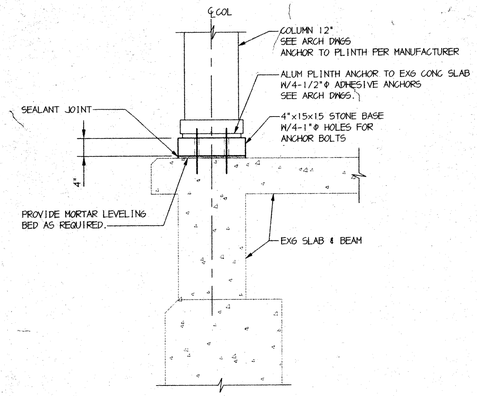
March 01, 1995 9:33:43 a.m.
Drawing: P:\PROJECTS\6096_00\S\6096S21.DWG
Xrefs: BKG-NEW1.DWG BKG-NEW8.DWG 6096TBLK.DWG



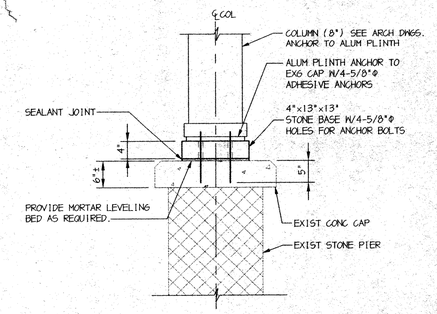
1 / S3.1 — 1A / S3.1 **SECTION**
SCALE : AS SHOWN



2 / S3.1 **SECTION**
SCALE : AS SHOWN



3 / S3.1 **SECTION**
SCALE : AS SHOWN



4 / S3.1 **SECTION**
SCALE : AS SHOWN

5 / S3.1 **SECTION**
SCALE : AS SHOWN

6 / S3.1 **SECTION**
SCALE : AS SHOWN

NOTE:

1. CONTR TO MAINTAIN STRAIGHT ALIGNMENT OF SCREED.
2. PROVIDE ADEQUATE BRACING OF SCREED @ CONSTRUCTION JT.

7 / S3.1 **SLAB ON GRADE CONST/CONTROL JOINT**
SCALE : AS SHOWN

SEE DWG. L1.1 FOR LOCATION

7 / S3.1 **TYPICAL FLAGPOLE FOUNDATION**
SCALE: 1/2" = 1'-0"

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
□ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1962
□ The Wallace Building 842 N. Broad Street Philadelphia, PA 19130 (215)232-3500 FAX (215)235-3530
□ 53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)795-2000 FAX (609)321-2009
□ 3711 Briarpark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052

PHR+A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners.
Alexandria, Virginia
3998 Fair Ridge Drive, PO Box 901
Fairfax, Virginia 22030
703-273-6700 Fax 703-352-3865

Construction Cost Systems, Inc.
CCS
1166 Main Street Suite 205 Stratford, CT 06497 (203)380-7662 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

SECTIONS AND DETAILS

SCALE	3/4" = 1'-0"
DRAWN	JPE
CHECKED	TG
APPROVED	
DATE	06/26/95

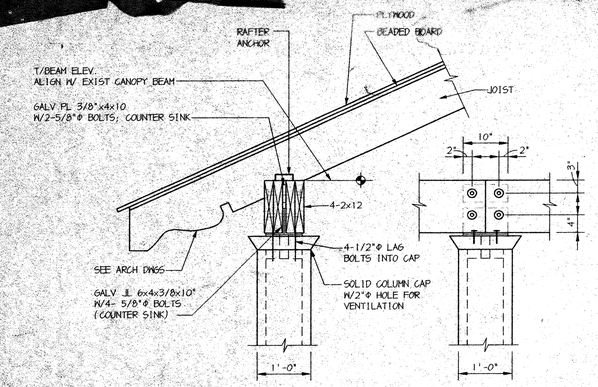
REVISIONS

SYM.	DATE	DESCRIPTION

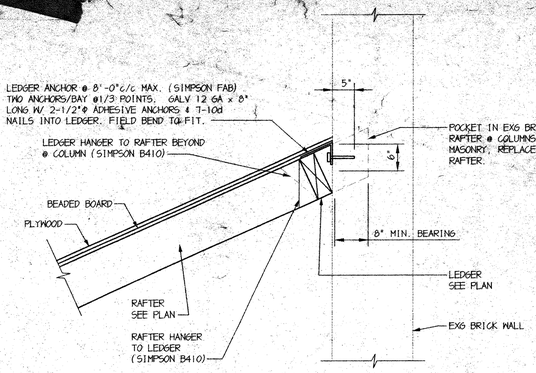
DRAWING NO.

S3.1

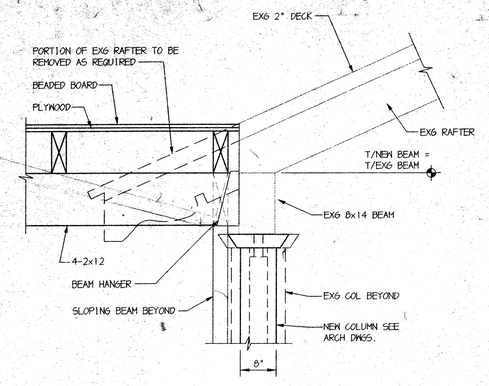
December 20, 1995 3:56:15 p.m.
Drawing: P:\PROJECTS\6096_00\S\6096S31.DWG
Xrefs: 6096TBLK.DWG



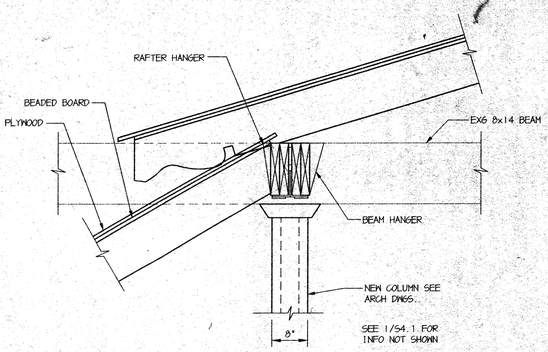
1 / S4.1 SECTION
SCALE : AS SHOWN



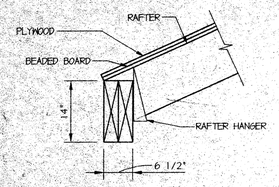
2 / S4.1 SECTION
SCALE : AS SHOWN



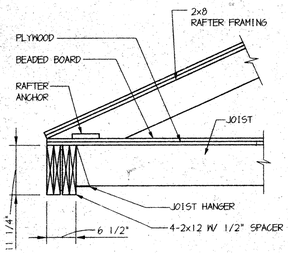
3 / S4.1 SECTION
SCALE : AS SHOWN



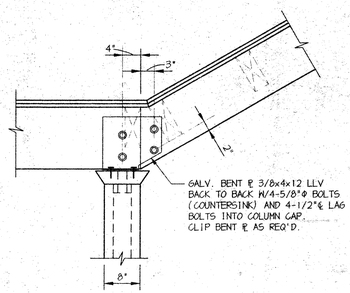
4 / S4.1 SECTION
SCALE : AS SHOWN



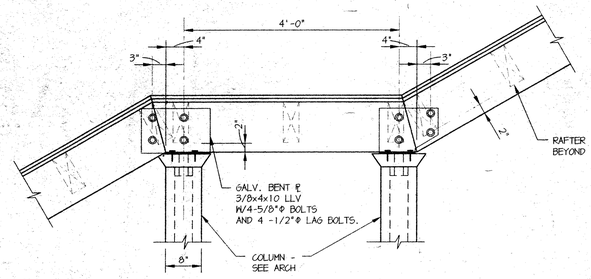
5 / S4.1 SECTION
SCALE : AS SHOWN



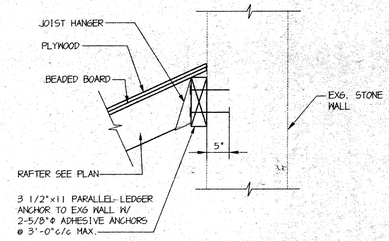
6 / S4.1 SECTION
SCALE : AS SHOWN



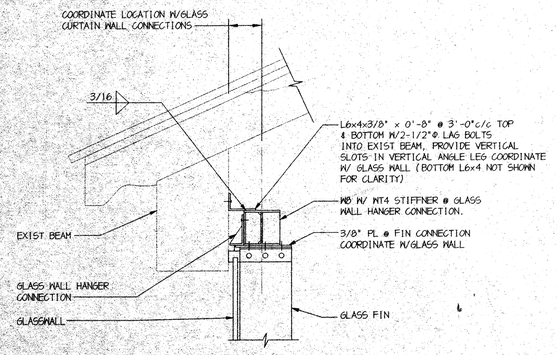
7 / S4.1 SECTION
SCALE : AS SHOWN



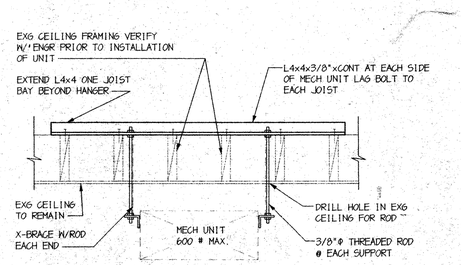
8 / S4.1 SECTION
SCALE : AS SHOWN



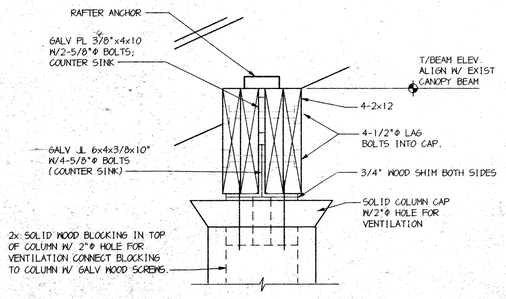
9 / S4.1 SECTION
SCALE : AS SHOWN



10 / S4.1 SECTION
SCALE : AS SHOWN



11 / S4.1 SECTION
SCALE : AS SHOWN



12 / S4.1 SECTION
SCALE : AS SHOWN

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
□ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
□ 53 Haddonfield Road Suite 300 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2099
□ 3711 Brierpark, Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
□ 1600 Duke St. Suite 400 Alexandria, VA (703)683- FAX (7

PHR&A
Peters Harris Root & Associates, pc Landscape Architects, Planners 2868 Mist Ridge Drive, PO Box 951 Reston, VA 22090 703-435-8900 Fax 703-435-8965

Construction Cost Systems, Inc. CCS
11160 Main Street Suite 205 Fairfax, Virginia 22030 703-691-3882 Fax 703-691-3460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
SECTIONS AND DETAILS

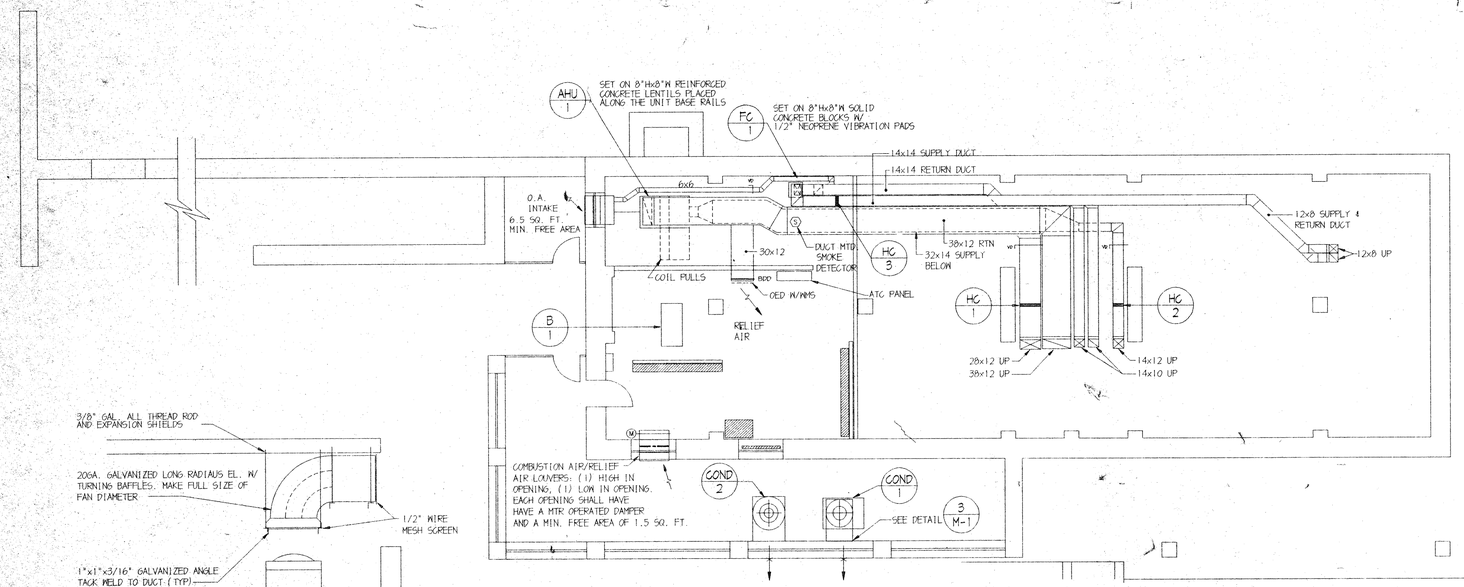
SCALE	3/4" = 1'-0" U.N.O.
DRAWN	JPE
CHECKED	TG
APPROVED	
DATE	06/26/95

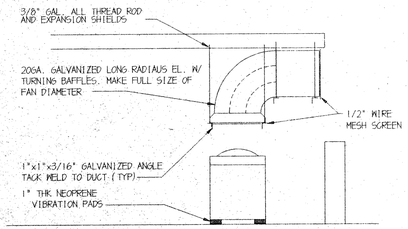
REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
S4.1

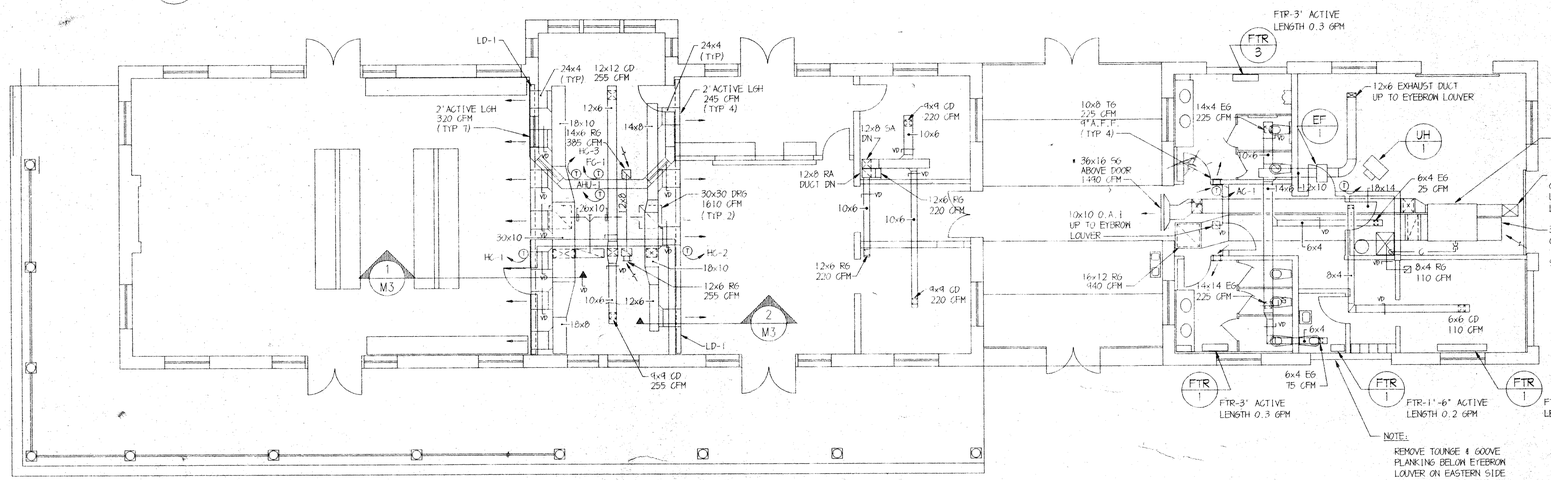
April 20, 1995 8:37:58 a.m.
Drawing: P:\PROJECTS\6096_00\S\6096S41.DWG
Xrefs: ROOFTILE.DWG





3 / M-1 CONDENSOR AIR DUCT (TYP 2)
N.T.S.

1 / M-1 PLAN - BASEMENT DUCTWORK
SCALE: 1/8"=1'-0"



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

ATC SEQUENCE OF OPERATION

AHU-1
THE SUPPLY AIR FAN SHALL DEENERGIZE IF SMOKE IS SENSED BY THE DUCT SMOKE DETECTOR
OCCUPIED - THE SUPPLY AIR FAN SHALL RUN CONTINUOUSLY. THE RELIEF AIR MOTOR OPERATED DAMPERS LOCATED ON THE COMBUSTION AIR LOUVER SHALL OPEN WHEN AHU IS IN OPERATION. HEATING - THE REHEAT COIL SHALL MAINTAIN A CONSTANT LEAVING AIR TEMPERATURE OF 55°. PROVIDE A FREEZESTAT SO THAT IF THE LEAVING AIR TEMPERATURE FALLS BELOW 38° THE FAN SHALL DE-ENERGIZE AND THE HEATING VALVE WILL GO TO THE FULL OPEN POSITION. COOLING - ON A RISE IN SPACE TEMPERATURE ONE OR BOTH OF THE REFRIGERATION CIRCUITS SHALL BE ENERGIZED AS DETERMINED BY THE SPACE THERMOSTAT. ECONOMIZER - WHEN THE OUTDOOR AIR TEMPERATURE IS 55° OR LESS, THE 1ST STAGE OF MECHANICAL COOLING SHALL BE LOCKED OUT OF OPERATION. ON A RISE IN SPACE TEMPERATURE, THE ECONOMIZER DAMPERS SHALL MODULATE IN ORDER TO MAINTAIN A LEAVING AIR TEMPERATURE OF 55°. ON A CONTINUED RISE IN SPACE TEMPERATURE, THE 2ND STAGE OF MECHANICAL COOLING SHALL BE ENERGIZED. PROVIDE A FREEZESTAT ON THE 1st STAGE OF THE EVAPORATOR THAT WILL CYCLE OFF MECHANICAL COOLING IF FROST IS ACCUMULATING ON THE COIL.
UNOCCUPIED - THE FAN SHALL NOT OPERATE.

FC-2
OCCUPIED - THE FAN SHALL RUN CONTINUOUSLY.
HEATING - ON A DROP IN SPACE TEMPERATURE, THE VALVE FOR HC-3 SHALL MODULATE OPEN IN ORDER TO MAINTAIN SETPOINT.
COOLING - ON A RISE IN SPACE TEMPERATURE THE REFRIGERATION CIRCUIT SHALL BE ENERGIZED AS DETERMINED BY THE SPACE THERMOSTAT.
UNOCCUPIED - THE FAN SHALL NOT OPERATE.

AC-1
OCCUPIED - THE FAN SHALL RUN CONTINUOUSLY.
COOLING - ON A RISE IN SPACE TEMPERATURE THE REFRIGERATION CIRCUIT SHALL BE ENERGIZED BY THE SPACE THERMOSTAT.
UNOCCUPIED - THE FAN SHALL NOT OPERATE.

EF-1 - SHALL SHALL RUN CONTINUOUSLY

BOILER
OCCUPIED - THE BOILER SHALL RUN CONTINUOUSLY WHEN THE OUTDOOR TEMP. IS LESS THAN 50° (ADJ.) W/ A WATER TEMP. OF 190°. P-1 AND P-2 SHALL RUN CONTINUOUSLY. THE MOTOR OPERATED DAMPERS LOCATED ON THE COMBUSTION AIR LOUVER SHALL OPEN WHEN THE BURNER IGNITES.
TANKLESS HEATER - PROVIDE A 3 WAY MIXING VALVE AND OUTDOOR RESET CONTROLLER FOR THE LOW TEMPERATURE SYSTEM. THE RESET CONTROLLER SHALL MODULATE THE MIXING VALVE IN ORDER TO MAINTAIN THE DESIRED WATER TEMPERATURE BASED ON OUTDOOR TEMPERATURE. THE RESET RATIO SHALL BE 1:1.5 (ADJ.) WITH THE WATER TEMPERATURE NOT EXCEEDING 140°.
UNOCCUPIED - OPERATION SHALL BE THE SAME AS IN THE OCCUPIED MODE, EXCEPT P-1 SHALL BE DE-ENERGIZED.

UH-1 - ON A DROP IN SPACE TEMPERATURE, THE THERMOSTAT SHALL ENERGIZE THE FAN. AN AQUASTAT SHALL LOCK OUT THE FAN IF THE SUPPLY WATER TEMPERATURE IS BELOW SETPOINT.

FTR - ON A DROP IN SPACE TEMPERATURE, A SELF CONTAINED THERMOSTATIC VALVE FOR THE RESPECTIVE FTR SHALL OPEN IN ORDER TO MAINTAIN SPACE SETPOINT.

HC-1, 2, 3 - ON A DROP IN SPACE TEMPERATURE, THE VALVE FOR THE RESPECTIVE HEAT COIL SHALL MODULATE OPEN IN ORDER TO MAINTAIN SPACE SETPOINT.

UNION STATION H.V.A.C.

EQUIPMENT

AHU 1 — TRANE SIZE 6 CLIMATE CHANGER, VERTICAL DRAW THRU CONFIG. W/FILT & MIX BOX, 12 1/4" FC FAN, 2.0 HP, 208/3/60, 3200 CFM, 1200 CFM O.A. 2 1/8"W.G. T.S.P., 0.7" WC ESP; 8 ROW, 2 CIRCUIT DX-COIL, 94.6 MBH SENS, 138.4 MBH TOT. E.A.T. 82.5/68.6, L.A.T. 55/54.9; 2 ROW HW COIL, 140°F, E.W.T., 170°F L.W.T., E.A.T. 46.3, L.A.T. 68, 75.0 MBH, 6.9 GPM

FC 1 — TRANE TWV736B14, 1100 CFM @ 0.5" ESP, 1/3"HP S.A.F., 208/1/60, E.A.T. 79/65.4, 23.2 MBH SENS, 31.8 MBH TOTAL

HC 1 — HOT WATER COIL, 190° E.W.T., 7.3 GPM, 2,220 CFM 79.2 MBH, E.A.T. 70°F, L.A.T. 100°F, APD 0.15" MPD 0.5 FT

HC 2 — HOT WATER COIL, 190° E.W.T., 3.2 GPM, 980 CFM 32.3 MBH, E.A.T. 70°F, L.A.T. 100°F, APD 0.15" MPD 0.5 FT

HC 3 — HOT WATER COIL, 190° E.W.T., 4.4 GPM, 1090 CFM 44.8 MBH, E.A.T. 62.4°F, L.A.T. 100°F, APD 0.15" MPD 0.5 FT

COND 1 — TRANE DUAL COMPRESSOR MODEL TTA150B, 146 MBH 44° O.A.T., 45° SST, 208/3/60

COND 2 — TRANE TTRT30B100A, 208/1/60, 30.0 MBH NOM. CAP.

P 1 — B & G, PD35, 1/2 HP, 34.6 GPM @ 21 FT HD 208/1/60

AC 1 — CARRIER 50AH060 PKG. AIR COOLED A/C, 1600 CFM, 450 CFM O.A., E.A.T. 82/67.8 54.1 MBH TOT, 42.3 MBH SENS., 0.5"WC E.S.P., 208/3/60

P 2 — B46, MODEL 2 1/2, 1/2 HP, 12.3 GPM @ 15 FT. HD. 115/1/60

EF 1 — PENN VENT ZEPHER MODEL Z-12 TDA 120/1/60, 550 CFM, 0.4." E.S.P.

FTR 11 — STERLING SENIOR SERIES, 830 BTU/LF 140°F E.W.T.

B 1 — WELL-McLAIN GAS BOILER, EGH-125-W, 550 MBH INPUT, 383 MBH OUT IBR. OPTIONS - INTERMITTANT SPARK IGN., TANKLESS HEATER.

UH 1 — STERLING HS-118A, 117.9 MBH, 190°F E.W.T., 50°F E.A.T., 1.8 GPM. 2.2 FT. WPD, 500 CFM

AIR DEVICES

- LD-1 TITUS GT-580 4" HIGH x 30 FT LONG
- SG TITUS 300RL SERIES
- GD'S TITUS TDC SERIES
- RG'S TITUS 350RL SERIES
- TG'S TITUS 350RL SERIES
- EG'S TITUS 350RL SERIES
- DRG DECLORATIVE RETURN GRILLE, GRECIAN STYLE # GR250, BRASS ANODIZED FINISH BY REGISTER AND GRILLE MFG. CO., BOOKLYN, NY. OR EQUAL. SEE DETAIL 7 / M3
- # PAINT AIR DEVICE AS DIRECTED BY ARCHITECT

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ 1800 Duke Street, Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662
☐ 3711 Bloraork, Suite 300, Houston, TX 77042 (713)789-9141 FAX (713)789-3052
☐ 53 Haddonfield Road, Suite 310, Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ The Wallace Building, 342 N. Broad Street, Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530

PHR+A
Patkus Herrin Rust & Associates, pc Preservation Architects, Landscape Architects 2926 Fort Ridge Drive, PO Box 901 Harrisonburg, Virginia 22801 703-270-6700 Fax 703-852-7985

Construction Cost Systems, Inc. CCS
11166 Main Street Suite 200 Fairfax, Virginia 22030 703-691-2662 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
H.V.A.C. DUCT PLAN

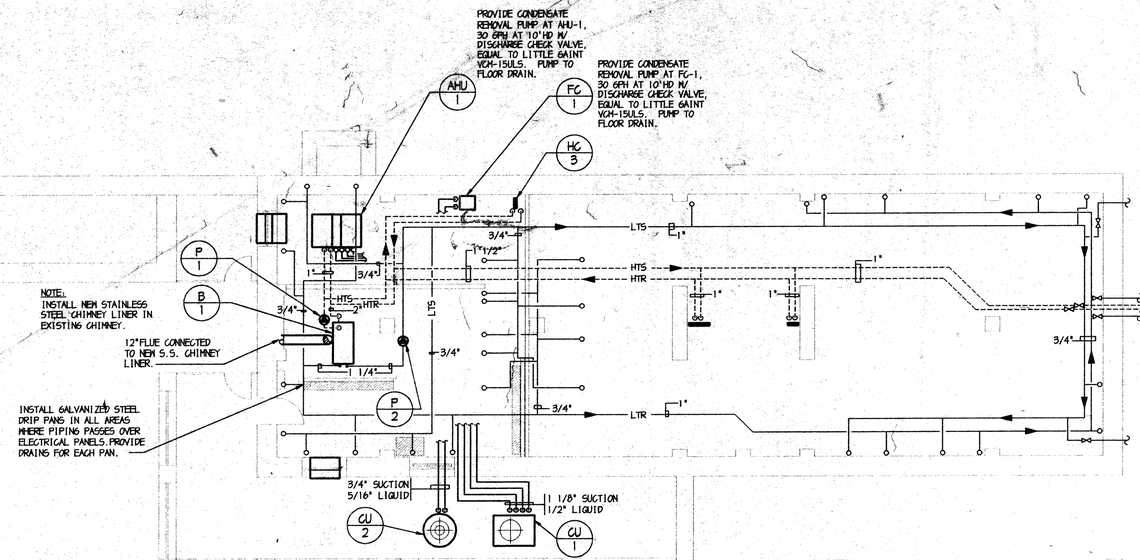
SCALE	1/8"=1'-0"
DRAWN	JNH
CHECKED	FMP
APPROVED	
DATE	6/26/95

REVISIONS

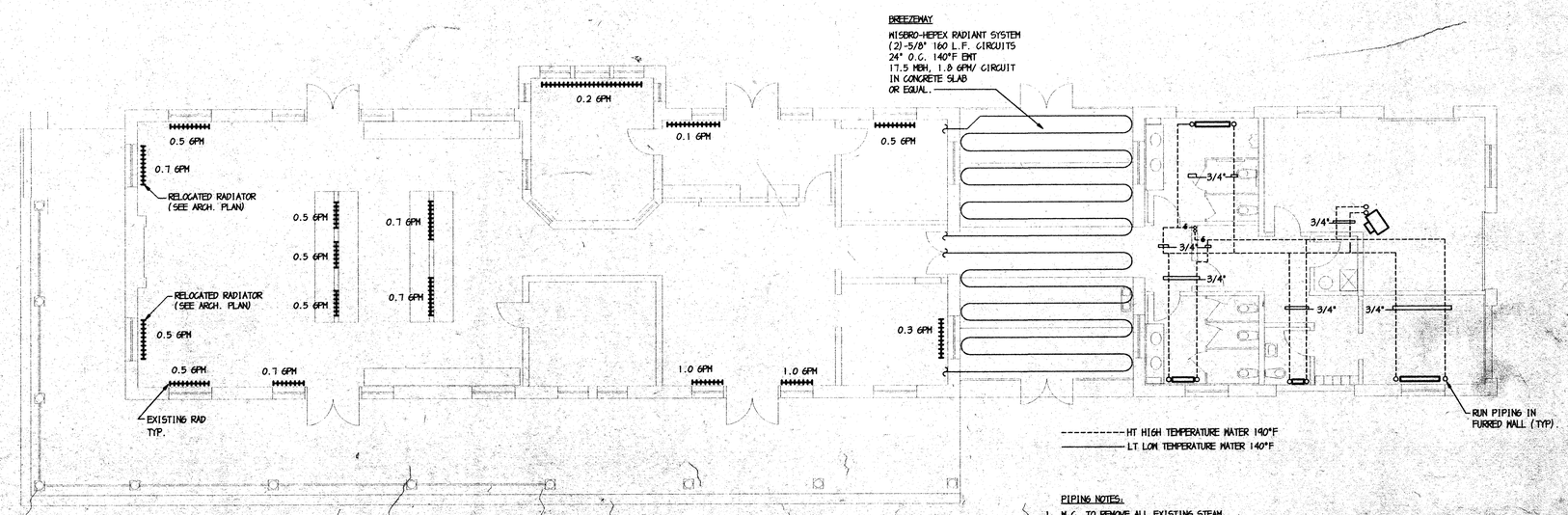
SYM.	DATE	DESCRIPTION
	01/11/95	FOR PRICING
	01/25/95	PRICING REV.

DRAWING NO.
M-1

24038



1 / M-1 PLAN - BASEMENT PIPING
SCALE: 1/8"=1'-0"



PIPING NOTES:

1. M.C. TO REMOVE ALL EXISTING STEAM PIPING TO EXISTING RADIATORS.
2. ALL EXISTING RADIATOR WATER PASSAGES ARE TO BE CLEANED AND FLUSHED. TURN RADIATORS OVER TO G.C. FOR EXTERIOR PAINT REMOVAL AND REFINISHING.

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

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)232-5300 FAX (215)235-3530
☐ 53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)321-2009 FAX (609)321-2009
☐ 3711 Briarpark Suite 303 Houston, TX 77042 (713)789-3052 FAX (713)789-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1616 FAX (703)683-1616

PHR&A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners
Suite 200, Eastgate Office Park
2968 Pacific Ridge Drive, PO Box 901
Falls Church, Virginia 22041-0901
703-575-8700 Fax 703-362-3883

Construction Cost Systems, Inc.
CCS
1108 Main Street
Suite 205
Boise, Idaho 83702
208-484-0662 Fax 208-484-2440

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 - VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

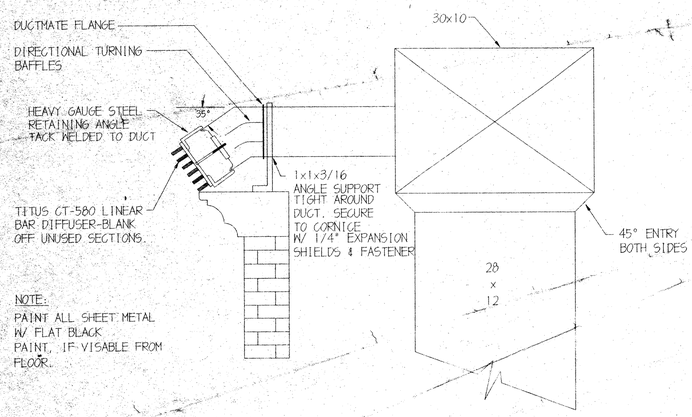
DRAWING TITLE
H.V.A.C. PIPING PLAN

SCALE	1/8"=1'-0"
DRAWN	JMH
CHECKED	PMP
APPROVED	
DATE	6/26/95

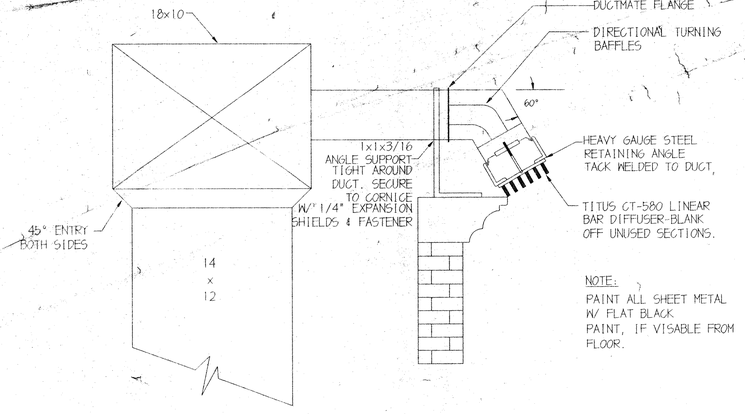
REVISIONS

SYM.	DATE	DESCRIPTION

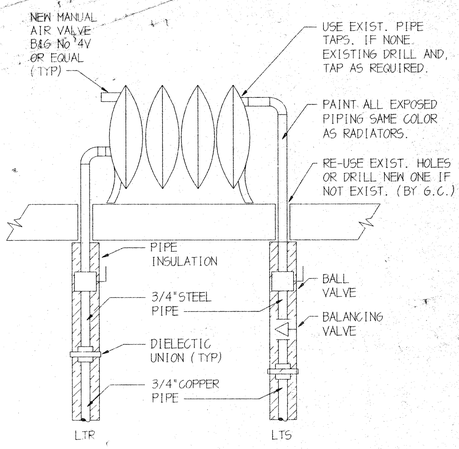
DRAWING NO.
M-2



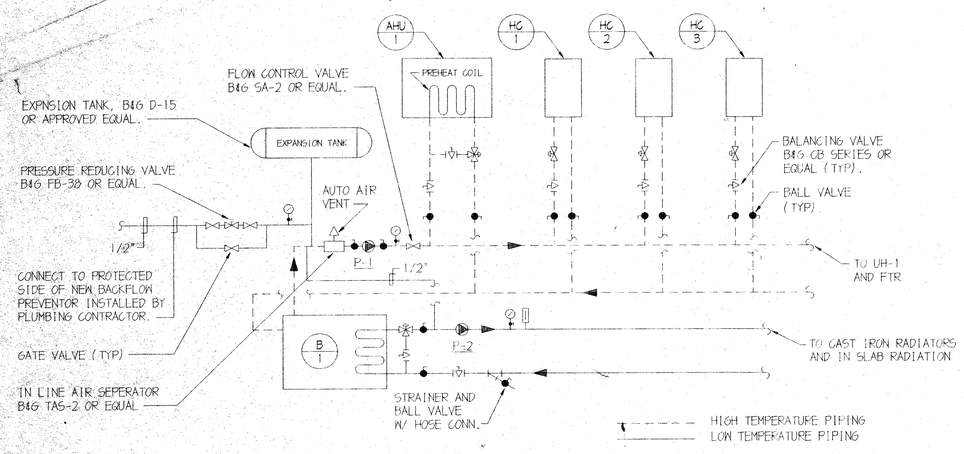
1/M3 SECTION 1
N.T.S.



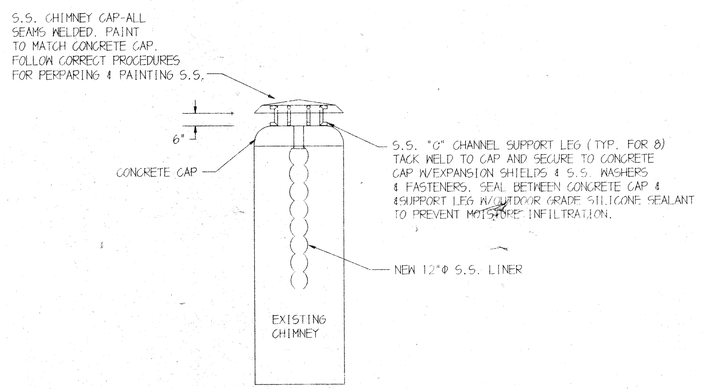
2/M3 SECTION 2
N.T.S.



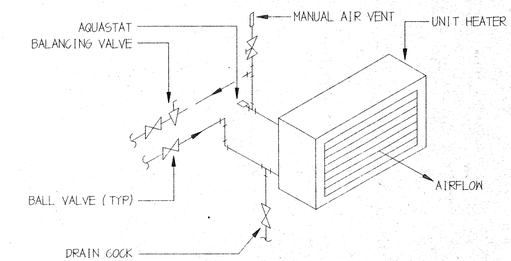
3/M3 RADIATOR DETAIL
N.T.S.



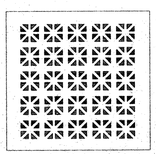
4/M3 HYDRONIC FLOW DIAGRAM
N.T.S.



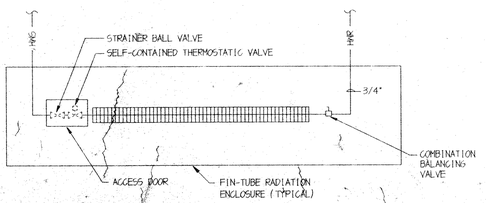
5/M3 CHIMNEY CAP DETAIL
N.T.S.



6/M3 HOT WATER UNIT HEATER PIPING
N.T.S.



7/M3 DECLORATIVE GRILLE
N.T.S.



18/M3 FIN-TUBE RADIATION DETAIL
N.T.S.

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
The Wallace Building 42 E. Penn Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
531 Haddonfield Road Suite 300 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
3711 Bridgeport Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3952
1600 Duke Street Suite 500 Alexandria, VA 22314 (703)683-1601 FAX (703)683-1673

PHR&A
Pitton Harris Rust & Associates, Pc
Historic Preservation and Landscape Architects
10560 Main Street Suite 201 Fairfax, Virginia 22030 703-591-2900 Fax 703-591-3865

C|C|S
Construction Cost Systems, Inc.
11166 Main Street Suite 200 Fairfax, Virginia 22030 703-591-3886 Fax 703-591-3491

PROJECT NO: 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF
ALEXANDRIA UNION STATION
FOR
THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
H.V.A.C. DETAILS & SECTIONS

SCALE	1/8"=1'-0"
DRAWN	BAM
CHECKED	PMP
APPROVED	
DATE	6/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
M-3

January 18, 1996 1:15:00 p.m.
Drawing: C:\DWGS\6096_00\6096M3.DWG

266538

SECTION 15000
DIVISION 15 GENERAL PROVISIONS
I. - GENERAL

1 Summary
A. It is the intention of the Contract Documents to call for a finished work, tested and ready for operation.
B. Drawings are diagrammatic, small scale, and indicate general arrangement of systems and work included. Drawings shall not be scaled. The Architect reserves the right to make minor changes in locations and sizes of piping and ductwork up to time of roughing-in without additional cost to the Contract.
a. Detailed drawings of proposed departures due to actual field conditions or other causes shall be submitted to the Architect for review, any such changes shall be made without additional cost. No departures shall be made without prior review of the Architect.
C. Coordinate Division 15 systems with related architectural, structural and electrical portions of the Work, and other Division 15 Contractors.
D. Accessories necessary to make the work complete, operational, and ready for use intended, shall be provided at no additional cost. Details such as offsets, fittings, and accessories not usually shown or specified, but manifestly necessary for the proper installation and operation of the various systems, shall be included in the work.

2 SUBMITTALS
A. General
1. The Contractor shall not perform work before review of the submittals by the Architect. The responsible Contractor may be required to remove, change, modify and replace such work to meet the conditions of the Contract Documents without additional compensation.
B. Equipment Manufacturers and Subcontractors:
1. Equipment Manufacturer: Within 30 days after award of contract, the Contractor shall furnish the Architect with a written list of all proposed equipment or product manufacturers for which product data submittals are required. Include the following data for each product.
a. Specification section number and paragraph.
b. Equipment description (e.g., AHU, Boiler, Pumps, etc.).
c. Equipment Manufacturer, Model Number and Contract Document Identification Number.
2. Submittal of equipment manufacturers list does not negate requirements for submission of product data, shop drawings, samples, quality control, contract closeout, and substitution request submittals.
C. Product Data Submittals:
1. Each product data submittal shall include the following data:
a. Drawing number or specification title and number of material or equipment.
b. Manufacturer, model number, construction materials (i.e., material type, gauges, finishes), descriptive details, pressure ratings and dimensions.
c. Electrical data and ratings.
d. Printed performance ratings, curves and tables, with operating point(s) indicated.
F. Complete power and control wiring diagrams, conforming to NEMA Standard for Industrial Controls and Systems.
g. Locations for external connections and support points.
h. Equipment clearances for service and operation.
i. List of product options selected.
D. Shop Drawing Submittals:
1. Shop drawings shall bear only minor field variations from contract documents. Each Trade Contractor shall identify any changes and provide a written explanation for the request. Failure to comply shall void review of shop drawings for such changes.
2. Mechanical Equipment Rooms, Fan Rooms and General Floor Plan Shop drawings shall be drawn at a scale of not less than 3/8 inch = 1'-0", unless otherwise approved in writing by the Architect.
3. Shop drawings shall show location and coordination of piping, equipment and ductwork based on actual item being provided. Prior to submitting to the Architect, shop drawings shall be reviewed, signed, and dated by General Contractor indicating their review and acceptance of the equipment arrangements. Show the following as applicable, for each piece of equipment and material specified.
a. Location of equipment with indicated equipment service clearances.
b. Locations and sizes of ductwork and acoustical lining.
c. Locations and sizes of sleeves and chases.
d. Elevation of ductwork above floor.
E. Operating and Maintenance Manuals:
1. Furnish not less than five (5) operating and maintenance manuals for each item of equipment or system being furnished.
2. Operating Manual Content: Include the following typewritten information for each item:
a. Brief description of system or equipment, including location and function.
b. Copies of applicable approved shop drawings and product data submittals.
c. System or equipment identification with full nameplate data, including name of manufacturer, model number and serial number of each component. Identify equipment by designation shown in Contract Documents.
d. Operating instructions.
e. Emergency instructions.
F. Inspection and test procedures.
g. Precautions against improper use and maintenance.
h. Copies of Warranties.
i. Instructions for repairs within capability of Owner's staff.
j. ASTM Form U-1 for all pressure vessels, tanks, cylinders and drums.
3. Maintenance Manual Content: Include the following typewritten or printed information for each item:
a. Installation instructions.
b. Wiring and control diagrams.
c. Maintenance instructions, procedures and schedules.
d. Parts list for each piece of equipment with identifying drawing.
e. Name, address and telephone number (24 hours per day, 7 days per week availability) of nearest two (2) servicing agencies.
f. Name, address and telephone number of nearest manufacturer's representative.
g. Material safety data sheets.
h. Testing and Balancing Reports.
H. Warranty
3. Quality assurance
A. Reference Standards: Applicable requirements of standards and specifications referenced in Division 15 sections apply to the Work.
B. Codes and Standards:
1. Work shall comply with recognized standards and codes (e.g., BOCA), applicable Federal, State and Municipal codes and requirements, and shall be subject to inspection and approval of authorities having jurisdiction.
2. It is not the intent to specify materials, equipment or methods of installation that may be in conflict with national, federal, state, local or utility company codes, standards or policies. Where these codes, standards or policies require a different material or method then specified, the Contractor shall notify the Architect in writing, and shall provide the proper material and perform the work, without additional compensation, to comply with these codes, after review by the Architect.
3. Equipment shall carry approval and be currently listed by Underwriter's Laboratories, Inc.

SECTION 15840
DUCTWORK
1. General

1. Provide rectangular and round sheet metal ductwork required for the various systems, including installation of control devices and connections to equipment required for the proper functioning of the work.

Insulate all concealed ductwork with 1 1/2" thick fiberglass blanket having a foil-scrim-kraft vapor barrier jacket equal to manville type 100.

Insulate all exposed ductwork with 1 1/2" thick rigid fiberglass board having a white facing with an integral vapor barrier jacket, equal to manville no. 815 spin glass ap.

2. Provide acoustical duct lining as required by the drawings and as specified.

3. Provide duct accessories including volume dampers, turning vanes, flexible connections, flexible ductwork, and miscellaneous materials.

4. Comply with applicable referenced portions of SMACNA "HVAC Duct Construction Standards, Metal and Flexible," 1985 Edition.

2. Rectangular Duct Fabrication
A. General: Except as otherwise indicated, fabricate rectangular ducts with galvanized sheet steel, in accordance with SMACNA "HVAC Duct Construction Standards". Conform to the requirements in the referenced standard for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.
1. Fabricate rectangular ducts in lengths appropriate to reinforcement and rigidity class required for pressure classification.
2. Provide materials that are free from visual imperfections, such as pitting, seam marks, roller marks, stains, and discolorations.
B. Crossbreak or bead duct sides that are 19 inches and larger and are 20 gage or less, with more than 10 sq. ft. of unbraced panel area, as indicated in SMACNA "HVAC Duct Construction Standards", Figure 1-8, unless they are lined or externally insulated.
C. Fabricate elbows, transitions, offsets, branch connections and other duct construction in accordance with SMACNA "HVAC Metal Duct Construction Standards", Figures 2-1 through 2-10. Provide 45 degree take-offs for branch connections.

3. Volume (Balancing) Dampers
A. Provide factory-fabricated dampers of single or multiblade design with required hardware and accessories. Single blade dampers shall be used on round ducts and rectangular ducts with height 10 inches and less. Multiblade dampers shall be used on rectangular ducts with height greater than 10 inches.
B. Stiffen damper blades to provide stability under operating conditions.
C. Provide locking device to hold single-blade dampers in a fixed position without vibration.
D. Provide end bearings at both ends of operating shaft.
4. Turning Vanes
A. Provide factory-built double wall type turning vanes.

II. Execution

1. Provide flexible connectors where rigid ducts attach to all mechanical equipment.
2. Construct and install each duct system for the specific duct pressure and sealing classifications indicated.
3. Detail and fabricate to keep resistance losses to a minimum. Fabricate ducts with the fewest possible joints.
4. Use factory-fabricated fittings for all changes in direction, size, shape and for connections.
5. * Install couplings tight to duct wall surface with projections into duct at connections kept to a minimum.
6. Duct penetrations for damper components shall be closed to seal duct consistent with duct pressure classification.
7. Lap metal ducts in direction of air flow. Hammer down edges and slips to leave smooth duct interior.
8. Rectangular elbows are used on Drawings for drafting convenience. The Contractor shall be allowed to construct tees, bends, and elbows (radius of not less than 1-1/2 times width of duct on center line) in lieu of rectangular elbows. Provide rectangular elbows, unless indicated otherwise, with double thickness air foil type turning vanes.
9. Increase duct sizes gradually, not exceeding 15 degree divergence wherever possible. Maximum divergence upstream of equipment to be 30 degree and 45 degree convergence downstream.
10. Rigidly construct ducts with joints mechanically tight, substantially airtight without the use of tape, braced and stiffened so as not to breathe, rattle, vibrate, or sag. Caulk duct joints and connections with sealant as ducts are being assembled. Where joints are not accessible for sealing, provide access doors and seal from inside. Use factory fabricated duct and plenum connectors for transverse joints with angle fastened to duct section with spot welds - do not use screws.
11. Total allowable duct leakage for each pressure class shall not exceed the permissible leakage for the specified seal class.
12. Provide galvanized steel frame for wall mounted dampers.

2. Duct Smoke Dectectors
A. Duct mounted smoke detectors shall be provided and installed under Division 15.
B. Duct mounted smoke detectors shall be located a minimum of six duct widths downstream from elbows or inlets. Avoid locating units adjacent to dampers which may restrict airflow past detector.
C. Locate detectors for easy service and observation in accordance with manufacturer's instructions.

3. Louvers
A. Provide collars and connections from ductwork to louvers indicated on the drawings. Unused louver areas shall be blanked-off with insulation.
END OF SECTION

SECTION 15510
HYDRONIC SYSTEMS
I. General

1. Insulation
A. Insulated all hot water piping with 1"thick molded fiberglass insulation having a foil backed white kraft jacket. equal to manville "micro-lok".
B. Valves and fittings shall be covered with fiberglass insert and premolded pvc covers equal to manville "zeston-2000".

2. In-line close coupled pumps
A. Provide pumps with capacities as indicated. Pumps shall be in-line type, close-coupled, single-stage design, for installation in vertical or horizontal position, and capable of being serviced without disturbing piping connections.
B. Manufacturers: Bell & Gossett or Armstrong Pumps.

3. Expansion tanks
A. Provide ASME Section VIII approved tank(s) stamped for 125 psi working pressure.
B. Tanks shall be diaphragm type with a heavy duty butyl diaphragm and equipped with system connection fittings, combination tank drain and air charger valve.
C. Manufacturers: Bell & Gossett or Armstrong Pumps.

4. Balancing valves
A. Piping 1/2 inch to 2 inches:
1. "Y" pattern equal percentage globe style, bronze construction.
2. Two metering ports on each side of valve seat.
3. 1/4 inch NPT tapped drain port on each side of valve seat.
4. Minimum four full 360 degree adjustment turn handwheel with position indicator with hidden memory feature. Quarter turn or full turn valves are unacceptable.
5. Threaded or solder pipe connections.
B. Manufacturers: Bell & Gossett, Armstrong Pumps or Tour and Andersson.

5. Air vents
A. Automatic Air Vents - Standard Type.
1. Bronze body with noniferrous internal components.
2. 150 psig working pressure, 240 degree F. operating temperature.
3. 1/2 inch inlet connection, 1/4 inch discharge connection.
4. Float actuated design.
5. Bell and Gossett Type 87.
B. Manufacturers: Bell & Gossett, Sarco, or Armstrong Pumps.

II. Execution

1. Installation - pumps
A. Install pumps in locations to provide access for periodic maintenance, including removal of motors, impellers, couplings and accessories.
B. Support pumps and piping separately so that the weight of the piping system does not rest on the pump.

2 Air venting
A. Provide on all high points of water circulating systems and on equipment where indicated an accessible automatic air venting device. Where high points are not readily accessible, provide an air venting device, and 1/4" piping or tubing to air vent in an accessible location. Piping to vent shall be able to withstand line pressure.

3. Expansion tanks
A. Each expansion tank shall be piped and fitted in accordance with manufacturers instructions.

4. Testing piping system
A. The piping system shall be pressure tested prior to application of insulation, painting and balancing.
B. All materials and equipment required for the testing shall be provided. Concealed work shall remain uncovered until tests have been completed.
C. Subject piping system to a hydrostatic test pressure which at every point in the system is not less than 1.5 times the design (not rated) pressure. The test pressure shall not exceed the maximum rated pressure for any vessel, pump, valve, or other component in the system under test.
D. After the hydrostatic test pressure has been applied for at least 2 hours, examine piping, joints, and connections for leakage. Eliminate leaks by tightening, repairing, or replacing components as appropriate, and repeat hydrostatic test until there are no leaks.

5. Cleaning and Flushing of Hydronic System
A. Before re-installation of the existing radiators, flush all loose sediment and sludge from waterways using clean water.
B. After the radiators are in place and the systems are filled, bring the boiler water temperature to 200° F.
C. Isolate the under-slab radiant piping from the low temperature water system using the shut-off valves and isolate the high temperature system using the shut-off valves for P-1.
D. Cycle on the low temperature circulating pump and set the 3-way valve for the tankless hot water heater so that the bypass port is fully closed.
E. Allow the water to achieve the maximum temperature, and allow the water to circulate in the system for 30 minutes.
F. Bleed all water from the system and clean the strainer.
G. Refill the system and repeat steps E and F until no sediment appears in the water during the system draining.
H. Put the 3-way valve back in its normal operating mode and re-fill the system. Re-open the valves for the under-slab radiation system and the high temperature piping system. Set the boiler temperature back to 140° F.
END OF SECTION

SECTION 15530
REFRIGERANT SYSTEMS
I. General

1 Pipe
A. Unless otherwise specified, all refrigeration, piping shall be refrigeration grade Type L or Type K hard drawn, degreased, sealed copper tubing. Alternate proposals may be submitted for the use of Type L refrigeration grade soft copper tubing for long under flow runs only providing runs are straight and free form kinks and bends.
B. All sweat type fittings shall be wrought copper or forged brass. All elbows and return bends shall be of the long radius type. If flare fittings are required, they shall be of the frost-proof type, except on connections not subject to condensation and constructed of forged brass. Soldered joints are preferred and shall be used wherever practical.

II. Execution

1. Contractor shall provide any necessary refrigerant piping, fittings, thermostatic expansion valves, filter/driers, sight glasses, moisture indicators, refrigerant, insulation, and all fittings and accessories necessary to make a complete installation and perform the service covered by this specification.

2. Pipe Installation
A. Tubing shall be installed in a neat, workmanlike manner with horizontal runs sloped toward the compressor at a rate of 1" per 20'. All lines shall be supported at intervals of not more than 8' and suitably anchored. Rubber grommets shall be used between tubing and clamps to prevent line chafing.
B. All joints shall be brazed with a suitable high temperature silver solder alloy containing not less than 15 percent silver. Use only a suitable silver solder alloy on all copper to copper connections in the suction line and liquid line. At any copper to brass joint where damage could occur from excess heat, use silver bearing solder. Use a solder with at least 35 percent silver content on all copper to steel, brass to steel, or steel to steel joints. During the brazing operation, dry nitrogen must be bled through the piping to prevent oxidation and scaling. H. All exposed suction lines shall be insulated as necessary to prevent condensation.
C. Insulation shall be of the cellular type such as Armstrong "Armaflex" or equal, shall fit the tubing snugly, and shall be applied and sealed in accordance with the manufacturer's instructions.
D. The refrigerant piping shall be adequately protected. Metal pipe sleeves shall be provided where tubing passes through a concrete wall or floor, and the space around the tubing shall be filled with plastic insulating compound.
E. Arrange the piping so that normal inspection and servicing of the compressor and other equipment is not hindered.

3. Refrigeration Accessories
A. A solder type combination liquid sight glass and moisture indicator shall be installed in each system and located for easy visibility.
B. If liquid line driers are not otherwise specified, they shall be of the filter-drier type and of the size recommended by the manufacturer.

4. Drain Accessories
A. Unless otherwise specified, condensate drains from coils will be the responsibility of the contractor. No drain line shall be smaller than the coil drain pan connection. All drain lines shall be hard copper. Lines should be sloped adequately to the drain by gravity any water accumulated from condensing, defrosting, or cleaning operations. All condensate lines must be trapped and run to an open drain. The depth of the trap shall be no smaller than the supply air fan's total static pressure (in inches of water column). They must not be connected directly to the sewer system. If necessary for cleaning, threaded unions shall be provided in the most accessible location near the fixture. Pipe secondary drains where provided for an equipment.
B. Any condensate line located above a ceiling shall be insulated with closed cell insulation.
END OF SECTION

SECTION 15940
TESTING, ADJUSTING, AND BALANCING,
HVAC SYSTEMS
I. General
1. Provide all services and equipment for complete testing, adjusting and balancing of supply air, return air, exhaust air and hydronic systems.
2. Provide incidental items not indicated on the drawings or mentioned in the specifications required for the work.

1. Quality Assurance
A. Reference Standards:
1. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Publications:
a. ASHRAE 1984, Handbook of Fundamentals, Chapter 13.
b. ASHRAE 1991, Handbook of HVAC Applications, Chapter 34.
2. National Environmental Balancing Bureau (NEBB).
A. Procedural Standards for Testing-Adjusting-Balancing of Environmental Systems.
B. It is the responsibility of the Mechanical Contractor to test, adjust, and balance the building mechanical systems identified above in order to produce the design objectives. Services shall include checking installations for conformity to design, measurement and establishment of the fluid quantities of the mechanical systems as required to meet design specifications, and recording and reporting the results.
3. Submittals
A. Submit testing, adjusting, and balancing reports at completion of work. The reports shall be proof that the systems have been tested, adjusted, and balanced in accordance with the referenced standards; are an accurate representation of how the systems have been installed; are a true representation of how the systems are operating at the completion of the testing, adjusting, and balancing procedures; and are an accurate record of all final quantities measured, to establish normal operating values of the systems. Follow the procedures and format specified below:
B. Report Format: Report forms shall be those standard forms prepared by the referenced standard for each respective item and system to be tested, adjusted, and balanced. Bind report forms complete with schematic systems diagrams and other data in reinforced, vinyl, three-ring binders. Provide binding edge labels with the project identification and a title describing the contents. Divide the contents of the binder into the below listed divisions, separated by divider tabs:
a. General Information and Summary.
b. Air Systems.
c. Hydronic Systems.
4. Report Contents
A. The report shall contain the appropriate forms containing as a minimum, the information indicated on the standard report forms prepared by the NEBB, for each respective item and system. Prepare a schematic diagram for each item of equipment and system to accompany each respective report form.
B. Provide recommendations for correcting unsatisfactory mechanical performances when system cannot be successfully balanced.
C. Study and report on noise and vibration problems which develop in the course of system balancing.

II. Execution

1. General
A. Provide all openings, pressure taps, wells, dampers, and closures required for balancing over and above those shown on the drawings, at no additional cost to the contract.
B. Systems shall be fully operational prior to beginning procedures.
C. During all tests, demonstrate that the systems are free from leaks and that all parts of the system operate correctly.
D. All testing, balancing and adjusting shall be completed prior to this instruction period to the Owner's Representative.
2. performing testing, adjusting, and balancing
A. Perform testing and balancing procedures on each system identified, in accordance with the detailed procedures outlined in the referenced standards.
B. Enlist the cooperation of equipment manufacturers where needed, to obtain proper equipment performance.
C. Cut insulation, ductwork, and piping for installation of test probes to the minimum extent necessary to allow adequate performance of procedures.
D. Patch insulation, ductwork, and housings, using materials identical to those removed.
E. Seal ducts and piping, and test for and repair leaks.
F. Seal insulation to re-establish integrity of the vapor barrier.
G. Mark equipment settings, including damper control positions, valve indicators, fan speed control positions, and similar controls and devices, to show final settings. Mark with paint or other suitable, permanent identification materials.
H. For whatever reason, if design airflow conditions can not be met for air systems, the Contractor shall provide required equipment or materials (e.g. sheaves) to provide the necessary design airflow.
I. Retest, adjust, and balance systems subsequent to significant system modifications, and resubmit test results.
J. Provide final adjustments to all equipment and controls required for proper operation, maintaining correct temperatures in all parts of the building.
K. Test and adjust mechanical systems for sound and vibration in accordance with the detailed instructions of the referenced standards.
END OF SECTION

SECTION 15955
AUTOMATIC TEMPERATURE
CONTROLS, ELECTRONIC

I - General

1. Summary
A. Provide as specified and indicated, a complete electronic temperature control system in order to accomplish the sequence of operation for all equipment listed on the drawings. The control system shall consist of all thermostats, sensors, temperature transmitters, controllers, automatic valves, automatic dampers, actuators, control panels, and other accessory equipment, materials and electrical control wiring.
B. Materials and equipment used shall be standard components, regularly manufactured for building temperature control systems. All control equipment, with the exception of unit mounted controls and as noted otherwise, shall be the product of the control manufacturer. Systems and components shall have been thoroughly tested and proven in actual use.
C. Provide all final connections to equipment requiring connection to the control system, whether furnished under this Section or not.
D. Control equipment shall be fully proportioning, except as noted otherwise. All setpoints shall be field adjustable. Final settings of all programable thermostats and control devices shall be made before final acceptance of systems.

2. Submittals
A. Submit shop drawings for each control system, containing the following information:
1. Schematic flow diagram of system showing fans, pumps, coils, dampers, valves and control devices.
2. Label each control device with setting or adjustable range of control.
3. Indicate all required electrical power and control wiring. Clearly differentiate between portions of wiring that are factory-installed and portions to be field installed.
5. Include verbal description of sequence of operation.
6. Submit maintenance instructions and spare parts lists for each type of control device. Provide operating and maintenance manuals following system installation and acceptance.
B. Submit certification that ATC Systems are properly installed and functioning adequately at project closeout.

Part 2 - Products

A. All ATC systems are to be electric or electronic. Acceptable manufacturers: Johnson Controls, Honeywell, Landis and Gyr Powers, Trane Co., and Barber Colman. No substitutions permitted.

B. Thermostats
1. Furnish the following thermostats for the respective equipment:
a. AHU-1 - 2 stage cooling, programable thermostat having a remote space temperature sensor, equal to a Honeywell T7300.
b. FC-1 - single stage heating and cooling programable thermostat having a remote space temperaturesensor, equal to a Honeywell T7300.
c. AC-1 - single stage heating and cooling programable thermostat having a remote space temperature sensor, equal to a Honeywell T7300.
d. UH-1 - single stage, heating only, non-programable, heavy duty, line voltage thermostat equal to a Honeywell T6051 or approved equal.
HC-1, 2, 3- low voltage proportional thermostat with tamper-proof setpoint adjustment, equal to a Honeywell T92E.
2. Locate remote space sensors as shown on drawings. Locate thermostats having remote space sensors where "ATC panel" is indicated on drawings.

B. Freezestats
1. Freezestats shall have 20 ft. low point sensitive elements (not averaging type) installed to serpentine the entire coil face area. Freezestats shall be two-position manual reset, line voltage type.
2. Freezestats shall be wired to shut down supply fan.

C. Control valves
1. All modulating straight-through water valves shall be provided with equal-percentage contoured throttling plugs. All three-way valves shall be provided with linear throttling plugs such that the total flow through the valve shall remain constant regardless of the valve's position.
2. Valves 2" and smaller shall be screwed type, valves 2 1/2" and larger shall be flanged. Valves shall be factory-rated to withstand pressures encountered. Valves shall have stainless-steel stems and spring loaded teflon packing.
3. Water valves shall be sized for a nominal pressure drop of 5 psig. Valves shall have replaceable seats and discs.

D. Control dampers
1. Dampers shall be single or multiple blade as required. All blankoff plates and conversions necessary to install smaller than duct size dampers are the responsibility of the Mechanical Contractor.
2. All damper frames shall be constructed of #16 gauge galvanized sheet metal and shall have flanges for duct mounting.
3. Damper blades shall not exceed 6" in width and 48" in length. All blades shall be roll formed, triple-V groove construction fabricated from #16 gauge galvanized sheet. 4. Blade edge seals shall be EPDM. Jamb seals shall be flexible metal, compression type. Seals shall be installed along the top, bottom and sides of the frame and along each blade edge. Seals shall provide a tight closing, low leakage damper. Leakage and flow characteristic charts shall be submitted prior to approval of dampers. Leakage shall not exceed 0.4% based on 1500 fpm approach velocity at 2.5" static pressure. Dampers and seals shall be suitable for temperature ranges of -40 to 200 deg. F.
5. Bearings shall be molded synthetic and linkage shall be concealed in frame. When more than one damper section is required, sections shall be interconnected by appropriate jack shafting. Axles shall be 1/2 inch plated steel hex.
6. For modulating applications, dampers shall be opposed blade type.

III - Execution

1. Installation
A. Check and verify location of thermostats and other exposed control sensors with plans and room details before installation. Locate thermostats and sensors 48 inches above floor unless otherwise indicated or required. Flush mounted on walls.
B. Install wiring in a neat and workmanlike manner. Wiring shall be concealed in all occupied rooms and areas. Mineral type covers shall not be acceptable.
C. Provide sun shields and weather protection for temperature sensors located outside.
D. Furnish wells for sensors to be installed in pipe.
E. Fasten flexible connections bridging cabinets and doors, neatly along hinge side, and protect against abrasion.
F. Provide a freezestat upstream of each heating coil which is subject to freezing due to the introduction of outside air into the system, and as noted.
G. Control Wiring: Install control wiring, without splices between terminal points, color-coded. Install in neat workmanlike manner securely fastened. Install in accordance with National Electrical Code.

2. Instruction and adjustment
A. Upon completion of the project, the Control Contractor shall adjust and validate the proper operation of all thermostats, controllers, valves, damper actuators, relays, etc., provided under this section.
B. Set control motors to operate valves, dampers and other devices to the limits established by the HVAC and the Balancing Contractor.
D. The Contractor shall instruct Owner's personnel in the operation, adjustment and routine maintenance of all systems and equipment furnished by him.
E. Before this installation is accepted, the Contractor shall deliver to the Architect a statement certifying that the control system and equipment has been inspected and found to be properly installed and functioning satisfactory.

3. Electric wiring
A. All electric control wiring and wiring connections required for the installation of the temperature control system, shall be provided for by this contractor.
B. All wiring shall comply with the requirements of local and national electric codes, and Division 16 Specifications. Power wiring for systems shall be provided by Division 16.
G. All exposed low voltage wiring shall be run in rigid galvanized condult or EMT.

END OF SECTION

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
The Wallace Building, 642 N. Broad Street, Philadelphia, PA 19130, FAX (215)235-3530
53 Haddonfield Road, Suite 306, Cherry Hill, NJ 08002, FAX (609)321-2009
3711 Bridgepark, Suite 300, Houston, TX 77042, FAX (713)789-3052
1600 Duke Street, Suite 400, Alexandria, VA 22314, FAX (703)683-1662
Construction Cost Systems, Inc.
CCS
11166 Main Street, Suite 205, Fairfax, VA 22030, 703-591-2462, FAX 703-591-2440
PHR+A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, 3030 Fairview Park Drive, Suite 800, Falls Church, VA 22042, 703-270-6000, Fax 703-560-3985

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
H.V.A.C. SPEC'S

SCALE	N.T.S.
DRAWN	JMH
CHECKED	PMP
APPROVED	
DATE	6/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
M-4

SYMBOL LIST

NOTE:
THIS IS A STANDARD SYMBOL LIST
ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT.

- 2'X 4' FLUORESCENT LT6 FIXT *'A' INDICATES FIXT TYPE (TYP) ALL SHADED FIXTS TO BE ON NIGHT LIGHT CIRCUIT FIXTURES THAT ARE HALF SHADED SHALL HAVE 1 OR 2 LAMPS ON THE NIGHT LIGHT CIRCUIT TYPE AS INDICATED
- 2' X 2' FLUORESCENT LT6 FIXT TYPE AS INDICATED ON DWGS
- 1' X 4' FLUORESCENT LT6 FIXT TYPE AS INDICATED ON DWGS.
- FLUORESCENT STRIP LT6 FIXT TYPE AS INDICATED ON DWGS
- RECESSED OR SURFACE MTD LT6 FIXTURE TYPE AS INDICATED ON DWGS.
- WALL MTD LT6 FIXT TYPE AS INDICATED ON DWGS
- WALL WASHER LT6 FIXT TYPE AS INDICATED ON DWGS
- EXIT LIGHT ARROWS INDICATE DIRECTION TYPE AS INDICATED. (WALL MOUNTED AND SINGLE OR DOUBLE FACE)
- EXIT LIGHT ARROWS INDICATE DIRECTION TYPE AS INDICATED. (CEILING MOUNTED AND SINGLE OR DOUBLE FACE)
- LIGHT TRACK WITH FIXTURES TYPE AND LENGTH AS INDICATED ON DWGS.
- $S_o S_b$ SINGLE POLE SWITCH 20A-125V MTD 48" AFF LOWER CASE LETTERS INDICATE FIXT TO BE CONTROLLED (GANGED SWITCHES)
- S SINGLE POLE TOGGLE SWITCH
- S_3 THREE-WAY SWITCH
- S_4 FOUR-WAY SWITCH
- S_D INDICATES DIMMER SWITCH
- S_K INDICATES KEY-OPERATED TUMBLER SWITCH (P & S 20AC - KL W/ KEY 4604)
- S_T INDICATES MANUAL MOTOR STARTER W/ THERMAL OVERLOAD PROTECTION
- S_M INDICATES MANUAL MOTOR STARTER W/O THERMAL OVERLOAD PROTECTION
- S_P INDICATES SWITCH W/ PILOT LIGHT
- TC TIME CLOCK
- PC PHOTO CELL CONTROL
- C CONTACTOR
- R RELAY
- DUPLEX RECEPTACLE 20A-125V GROUNDING TYPE MTD 18" UON (*) = CHILD PROOF RECEPT 6.E. TYPE 'GE8300'
- GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE 20A-125V
- DEDICATED RECEPTACLE W/ ISOLATION GREEN GROUND SURGE PROTECTION TYPE WITH ISOLATED GROUND. (P & S #16 8362 ISP)
- $_S$ DUPLEX RECEPTACLE 20A-125V GROUNDING TYPE MTD 18" UON (S) = SURFACE MOUNTED
- $_{CL}$ DUPLEX RECEPTACLE 20A-125V GROUNDING TYPE MTD IN CEILING
- FLUSH MTD FLOOR OUTLET WITH DUPLEX RECEPTACLE 20A-125V UON
- QUADRUPLEX RECEPTACLE 20A-125V GROUNDING TYPE MTD 18" UON
- SINGLE SPECIAL PURPOSE OUTLET PROVIDE NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT
- MH SURFACE MOUNTED RACEWAY (INDICATED ON DWGS.)
- MOTOR RATING IS INDICATED ON DRAWING ALL NECESSARY DISC SHALL BE INCLUDED AS NEEDED
- OUTLET MOUNTED IN FAN, REFER TO DETAILS
- DISCONNECT SWITCH RATING AND TYPE AS REQUIRED BY NEC
- FUSED DISCONNECT SWITCH
- COMBINATION STARTER/DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- JUNCTION BOX "FL" INDICATES FLOOR MOUNTED
- 8'-0" AFF INDICATES MOUNTING HEIGHT ABOVE FINISHED FLOOR
- + INDICATES MOUNTING HEIGHT OTHER THAN STANDARD DEVICE REFER TO ARCHITECTS DWGS
- * INDICATES CHILD PROOF RATED
- HP-1 EQUIPMENT LABEL / IDENTIFICATION NUMBER
- CONDUIT RUN EXPOSED
- CONDUIT CONCEALED BY FINISH
- CONDUIT RUN EMBEDDED IN BUILDING CONSTRUCTION
- E EMERGENCY CIRCUIT
- NL NIGHT LIGHT CIRCUIT
- HOME RUN TO PANEL ARROWS AND NUMBERS INDICATE CIRCUITS
- CONDUIT TURNED OR STUBBED UP
- CONDUIT RUNNING UP AND DOWN
- CONDUIT TURNED OR STUBBED DOWN
- 277/480V 3Ø 4W PANEL
- 120/208V 3Ø 4W PANEL
- T TRANSFORMER SUSPENDED OR INSTALLED ON FLOOR AS NOTED ON DRAWING RATINGS AS INDICATED IN SINGLE LINE
- GROUND ROD - 3/4" COPPER ROD 10'-0" LONG

COMMUNICATIONS SYSTEMS

- TELEPHONE OUTLET - SINGLE GANG BOX WITH (1) 200 POUND NYLON PULL CORD TO BASEMENT PROVIDE BLANK COVERPLATE WITH GROMMET HOLE.
  *"M" INDICATES WALL MOUNT
  *"PS" INDICATES PAY STATION
  *"HC" INDICATES HANDICAPPED
- (S) SPEAKER SHOWN FOR REFERENCE ONLY NOT BEING PROVIDED BY DIV. 16
- (M) MICROPHONE OUTLET
- (TV) TV OUTLET - 2 GANG BOX WITH (2) 200 POUND NYLON PULL CORD TO CEILING CAVITY AND COVERPLATE WITH GROMMET HOLE
- WALL MOUNTED CLOCK WITH POWER OUTLET AS REQUIRED.
- (C) COMPUTER NETWORKING OUTLET - 3 GANG BOX WITH (3) 200 POUND NYLON PULLCORD TO CEILING CAVITY AND COVERPLATE WITH GROMMET HOLE.

FIRE ALARM

- F MANUAL PULL STATION MTD 48" AFF
- (P) AUDIO/VISUAL FIRE ALARM SIGNAL SEE SPEC FOR TYPE - MTD 6'-8" AFF UON
- VISUAL FIRE ALARM SIGNAL ONLY SEE SPEC FOR TYPE - MTD. 6'-8" A.F.F. U.O.N.
- (S)D SMOKE DETECTOR ("D" INDICATES DUCT DETECTOR)
- (S)E SMOKE DETECTOR ("E" INDICATES ELEVATOR LOBBY DETECTOR)
- (H)A HEAT DETECTOR 135° AND RATE OF RISE ("A" = ABV CL6 "F" = FIXED TEMP)
- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- MAGNETIC DOOR HOLDER
- TS TAMPER SWITCH (SPRINKLER)
- FS FLOW SWITCH (SPRINKLER)
- GAP FIRE ALARM GRAPIC ANNUNICATOR PANEL

MOUNTING HEIGHT SCHEDULE

9" BELOW FINISHED CLG.	CLOCKS
12" BELOW FINISHED CEILING OR AS INDICATED	BATTERY LT6. UNITS, REMOTE LIGHT HEADS
CENTERED ABOVE DOOR OPENING	BACK MOUNTED EXIT SIGNS
7'-8"	TV OUTLETS
6'-8"	F/A SIGNALS, BELLS
6'-6"	TOP OF LT6. OR PNR. PNL. TOP OF TELE. CABINET
6'-3"	TOP OF BACK-MTD. EXIT FIXT'S.(NOT ABOVE DOOR)
6'-0" MAX.	TOP OF SAFETY DISCONN SW., CONTACTORS MAGNETIC STARTERS
4'-6"	TELE.(TOP OF COIN SLOT) TELE. OUTLET (WALL)
4'-8"	INTERCOM STATION, THERMOSTAT
4'-0"	MANUAL CONTROL DEVICES FIRE ALARM PULL STA. HANDICAP "PS" TELE.
1'-6" *	RECEPTACLES, TELE. OUTLET (DESK) TELEVISION OUTLETS COMPUTER OUTLETS MICROPHONE JACKS
0'-0"	FINISHED FLOOR

* EXCEPT AS NOTED ON DRAWINGS OR IN SPECIFICATIONS

+ = MOUNT DEVICE ABOVE COUNTER SEE GENERAL NOTE 13.

NOTE: MOUNTING HEIGHTS ARE TO CENTER OF OUTLETS UNLESS OTHERWISE NOTED.

ADD ALTERNATE: #2

PROVIDE PRICE FOR INSTALLATION OF FIXTURE TYPE "G" AS INDICATED ON PLANS. INCLUDE INSTALLATION COSTS, AS WELL AS ALL ASSOCIATED WIRING, CONDUIT, SWITCHES AND ASSOCIATED APPERTENANCES.

ELECTRICAL GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE TO COORDINATE CEILING TYPE WITH FIXTURE MOUNTING HARDWARE.
2. ALL MULTI-SWITCH LOCATIONS SHALL BE GANGED IN A COMMON BACK-BOX. LOCATIONS WITH (5) SWITCHES OR LESS SHALL HAVE A COMMON FACE PLATE WHERE PHYSICALLY POSSIBLE.
3. PANELS SHOWN ON LIGHTING PLANS ARE FOR REFERENCE ONLY. SEE POWER PLANS FOR EXACT LOCATIONS.
4. INSTALL ALL COMPACT FLUORESCENT DOWN LIGHTS WITH LAMPS PERPENDICULAR TO LONG AXIS OF SPACE.
5. ALL EXTERIOR LIGHTING FIXTURES, SPEAKERS AND MISCELLANEOUS ELECTRICAL DEVICES MOUNTED ON WALLS OR IN EARTH SHALL BE COORDINATED WITH ARCHITECTURAL WALL ELEVATIONS AND LANDSCAPE DRAWINGS.
6. UNLESS OTHERWISE NOTED ON PLANS OR IN THE LIGHTING FIXTURE SCHEDULE. FINISH COLORS ARE TO BE SELECTED BY THE ARCHITECT.
7. ALL FLUORESCENT LIGHTING FIXTURES SHALL HAVE ELECTRONIC BALLASTS; ALL HID AND COMPACT FLUORESCENT LIGHTING FIXTURES SHALL HAVE HIGH POWER FACTOR BALLASTS.
8. ALL FEEDER CIRCUITS SHALL BE RUN IN RGS, IMC OR EMT. FOR ALL OTHER CIRCUITS, MC CABLE IS APPROVED FOR USE WHERE CONCEALED IN FINISH, UNLESS OTHERWISE INDICATED ON PLANS OR IN CODES.
9. UNLESS OTHERWISE NOTED, ALL EXIT SIGNS MOUNTED ABOVE DOORS WITH GLASS TRANSOMS SHALL BE MOUNTED 1'-0" O.C. ABOVE TOP OF TRANSOMS. ALL CONDUITS FOR THESE SIGNS MUST BE IN TRANSOM MULLION.
10. UNLESS OTHERWISE NOTED, ALL LIGHTING FIXTURES SHALL BE TYPE "A".
11. LIGHTING FIXTURES NOTED (*) ARE TO HAVE COLOR SPECIFIED BY ARCHITECT. ARCHITECT WILL PROVIDE COLOR CHIPS FROM ANY PAINT SUPPLIER VIA THE CONTRACTOR. ACTUAL FIXTURES COLORS MAY BE SELECTED FOR SAME TYPE ON A PER ROOM BASIS.
12. COORDINATE LOCATION OF WALL SWITCHES, OUTLETS AND OTHER WALL MOUNTED HARDWARE WITH ARCHITECTURAL FLOOR PLANS TO AVOID CONFLICTS WITH DOORS, CHALKBOARDS AND TACKBOARDS.
13. RECEPTACLES MOUNTED ABOVE COUNTER TOPS SHALL BE MOUNTED HORIZONTALLY 6" O.C. ABOVE BACKSPLASH OR SIDE RETURN.
14. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL DEVICES.
15. ALL 208/120V BRANCH CIRCUITS EXTENDING 100 FEET IN LENGTH SHALL UTILIZE THE NEXT HIGHER WIRE SIZE THAN THAT INDICATED ON PLANS OR SCHEDULES TO INSURE VOLTAGE DROP OF LESS THAN 3 %.
16. ALL SURFACE MOUNTED OUTLETS, SWITCHES AND OTHER DEVICES IN FINISHED AREAS SHALL BE FEED VIA MIREMOLD SURFACE MOUNTED RACEWAY.
17. ALL HIGH INTENSITY DISCHARGE (H.I.D.) LAMPS SHALL BE OF THE FAIL-SAFE TYPE WHICH WILL PERMANENTLY EXTINGUISH THEMSELF WITHIN TWO MINUTES AFTER THE OUTER GLASS OF THE BULB IS BROKEN
18. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN EMT.
19. ALL EMERGENCY BATTERY PACKS SHALL BE CONNECTED AHEAD OF THE SWITCH CONTROLLING THAT CIRCUIT.

ELECTRICAL ABBREVIATIONS

above finished floor	AFF	each	EA	incandescent	INCAN	panel	PN
above finished grade	AFG	electric water cooler	EWC	isolated ground	IG	penter	PEN
accent	ACC	electrical	ELEC			plywood	PLY
adjustable	ADJ	electrical contractor	EC	junction box	JB	pole	P
aerial electric	AE	electrically operated	EO			polyvinyl chloride	PVC
aerial telephone	AT	elevator	ELEV	kilovar (reactance)	KVAR	potential transformer	PT
alternating current	AC	emergency	E	kilovolt ampere	KVA	power panel	PP
aluminum	AL		EMERG	kilowatt	KW	pull box	PB
American wire gauge	AWG	energy saving ballast	ESB	kilowatt hour meter	KWH		
ammeter	AM	equipment	EQUIP			rapid start	RS
ampere	A/AMP			inverter power supply	IPS	receptacle	REC/RECPT
approximate(ly)	APPROX	exhaust fan	EF			reflector	REFL
asymetric	ASY	explosion proof	XP	light	LT	required	REQ'D
automatic transfer switch	ATS	existing relocated	ER	lighting	LTG	rigid galvanized	
		existing to remain	EX	lightning arrester	LA	steel conduit	RGS
battery	BATT	existing aerial telephone	XAT	low voltage	LV	room	RM
black	BLK	existing underground					
bracket	BRKT	electric	XUE	main circuit breaker	MCB	schedule	SCHED/SCH
breaker	BKR			main distribution panel	MDP	single pole double throw	SPDT
				main lugs only	MLO	single pole single throw	SPST
cabinet	CAB	fire alarm	FA	manhole	MH	solid state ballast	SSB
cable television	CATV	fire alarm annunciator panel	FAAP	manual transfer switch	MTS	switch	SW
ceiling	CLG	fire alarm control panel	FACP	manufacturer	MFR	switchboard	SWBD
circuit	CIR/CKT	fire alarm graphic		master antenna television	MATV	switchgear	SWGR
circuit breaker	CB	annunciator panel	FAGP	mechanical contractor	MC		
clear	CLR	fixture	FIXT	medium voltage	MV	telephone	TEL
closed circuit television	CCTV	floor	FL	metal halide	MH	transformer	XFMR
column	COL	fluorescent	FLUOR	metal-clad cable	MC	twin tube	TT
communication	COMM	footcandles	FC	miscellaneous	MISC	typical	TYP
conduit	C	full load amperes	FLA	motor circuit protector	MCP		
cool white	CW	full voltage nonreversing	FVNR	motor control center	MCC	underground electric	UE
copper	CU			motor operated damper	MOD	Underwriter's Laboratories	UL
current limiting fuse	CLF	general contractor	GC	mounted	MTD	uninterruptable power supply	UPS
current transformer	CT	generator	GEN	mounting height	MTG	unless otherwise noted	UON
		ground	GND/G		HT		
		ground fault interrupter	GFI			vapor proof	VP
decibel	DB					volt	V
dedicated	DED	hand hole	HH	National Electric		voltmeter	VM
diameter	DIA	heating ventilating		Manufacturers Association	NEMA		
direct current	DC	air conditioning	HVAC	National Electric Code	NEC	warm white	WW
disconnect	DISC	hertz	HZ	normally closed	NC	watt	W
distribution panel	DP	high intensity discharge	HID			weatherproof	WP
double pole double-throw	DPDT	high power factor	HPF	night light	NL	with	W
downlight	DNLT	high voltage	HV	normally opened	NO	within	W/I
drawing	DWG	horsepower	HP	Not Available/Not Applicable	N/A	without	W/O
dual element	DE			not in contract	NIC		
				not to scale	NTS		
				on center	OC		
				overhead	OH		
				overload heater element	OL		

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER & CATALOGUE NO.	MOUNTING REC.	MOUNTING SURF.	MOUNTING SUSP.	LAMPS	VOLTAGE	REMARKS
A	WALL MOUNTED 175 W METAL HALIDE FIXTURE	SPI LIGHTING SFG MS 1403		X		1-175 W MED/MOGUL MH 3000K	120	FINISH SHALL BE MANUFACTURER PAINT NO. C5
B *	8' FLUORESCENT SUSPENDED UPLIGHT	FINELIGHT 2-51-8'-2T8-DC-EP-12-AC18'			X	6-32 W T8 -MM	120	PROVIDE W/ ELECTRONIC BALLASTS
C	1' X 4' 2-LAMP PRISMATIC LENS FLUORESCENT TROFFER	METALUX 6-232A-120-EB-81	X			2-32 W T8-MM	120	PROVIDE W/ ELECTRONIC BALLASTS
C1	2-LAMP WALL MOUNTED FLUORESCENT	METALUX BE-2-32-120-EB-81		X		2-32 W T8 - MM	120	SEE ARCH. DWG FOR EXACT LOCATIONS
D1	RECESSED COMPACT FLUORESCENT DOWNLIGHT W/ 7" APERTURE	HALO H7641-4640 BA	X			2-9 W F9 TT	120	PROVIDE HPF BALLAST
D	FLUSH MOUNTED COMPACT FLUORESCENT FIXTURE - 15" DIA.	MINONA LIGHTING 4430-F-CNF-RMB		X		2-13 W PL 2700 K	120	FINISH SHALL BE SATIN STAINLESS STEEL (US # 32D)
F1	2-LAMP FLUORESCENT INDUSTRIAL STRIP FIXTURE	METALUX 1A-232-120-EB-81		X	X	2-32 W T8 - MM	120	CHAIN MOUNT 10' - 0" AFF IN RM 116
G *	13" DIA . 25" DEEP 175 W M H PENDANT MOUNT FIXTURE	LITHONIA GP13 175M AR		X		1-100 W MED BASE MH 3000K	120	PROVIDE PENDANT MOUNTING T16HT TO CEILING AS POSSIBLE
H	SURFACE MOUNTED HID WALL PACK	MATCH EXISTING TRAIN PLATFORM CANOPY FIXTURE MANUFACTURER AND MODEL #		X			120	
X1	SINGLE FACED SURFACE MOUNTED EXIT SIGN WITH 2 EMERGENCY HEADS	SURE LITES PLX 7202-RDS		X		2-7 W COMP FLUOR. 2-9 W PAR 36	120	
X2	DUAL HEAD EMERGENCY BATTERY PACK	SURE LITES XR-21-2		X		2-9 W PAR 36 (#29 - 86)	12	PROVIDE WITH (1) 1-MS-PY MOUNTING SHELF PROVIDE XR-21-0 WHEN FIXTURE IS SHOWN WITH REMOTE HEADS
X3	12 VOLT INCANDESCENT SEALED BEAM REMOTE EMERGENCY HEAD	SURE LITES 12X-8		X		8 W INCAND SEALED BEAM (#24-44)	12	
J *	PENDANT MOUNTED CHANDALIER	TO BE DETERMINED AT A LATER DATE			X		120	ALLOW $6000 PER FIXTURE
I	HID ASSYMETRIC REFLECTOR FLOOD LIGHT W/DARK BRONZE FINISH	ARDRON - MACKIE E4051063		X		250 W MH M 58 CLEAR MOGUL BASE 3000K	120	MOUNT ABOVE CORNICE, SEE DETAILS AND ARCH DWGS FOR EXACT LOC. PROVIDE (1) B61000 461 BALLAST PER FIXTURE
K	4' TRACK LIGHTING WITH 3 - 150 W PAR 38 LAMPS W/DARK BRONZE FINISH	HALO L764 (PROVIDE 3 HEADS PER FIXTURE)		X		3 - 150 W PAR 38	120	PROVIDE L651 - MB TRACK WITH DARK BRONZE FINISH PROVIDE L480 FITTING WHERE REQUIRED, MOUNT TO BOTTOM CHORD OF TRUSS. SEE DETAILS AND ARCH. DWGS.
L	CONCRETE BOLLARD WITH 100M MH, PYRAMID TOP, SMOOTH FINISH	ARCHITECTURAL AREA LT6. CB125 36 - HORZ - PYRM		X		1 - 100 W MED BASE MH 3000 K.	120	PROVIDE SMOOTH CONCRETE FINISH

VITETTA GROUP
ARCHITECTURE ENGINEERING PLANNING INTERIOR DESIGN
1600 Duke Street, Suite 400, Alexandria, VA 22314 (703)683-1600 FAX (703)683-1698
The Wallace Building, 642 N. Broad Street, Philadelphia, PA 19130 (215)235-3530 FAX (215)235-3530
53 Haddonfield Road, Suite 306, Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
3711 Bronpark Drive, Suite 300, Houston, TX 77042 (713)789-9141 FAX (713)789-3052
PHR&A
Peter Harris Rost & Associates, PC Engineers, Surveyors, Planners 3601 Eisenhower Avenue, Suite 600 Alexandria, VA 22304 703-329-0900 FAX 703-329-3865
CCS Cost Systems, Inc. Construction
11166 Main Street, Suite 300 Fairfax, Virginia 22030 703-591-2662 FAX 703-591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
COVER SHEET

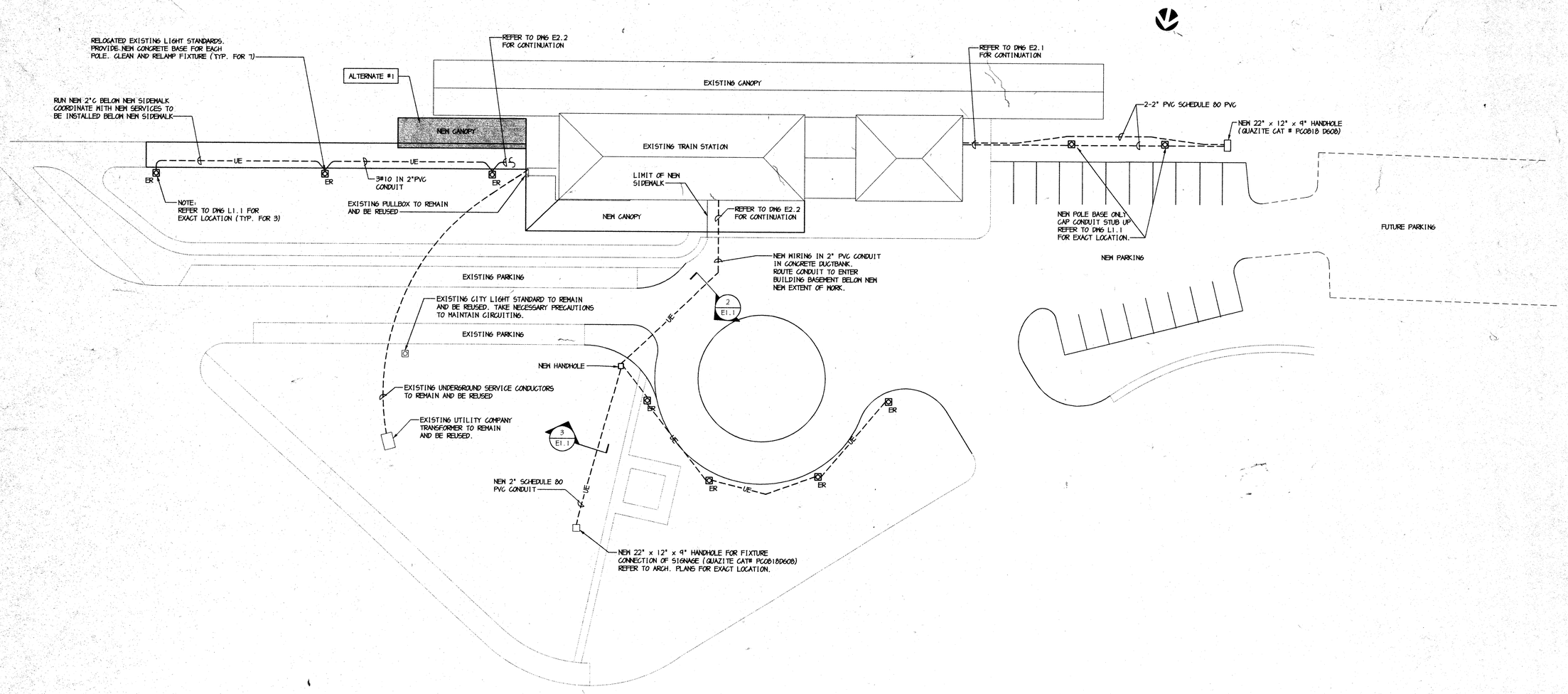
SCALE	AS SHOWN
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

REVISIONS

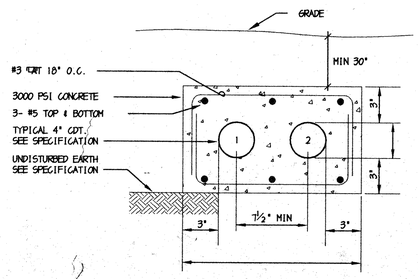
SYM.	DATE	DESCRIPTION

DRAWING NO.
E1.0

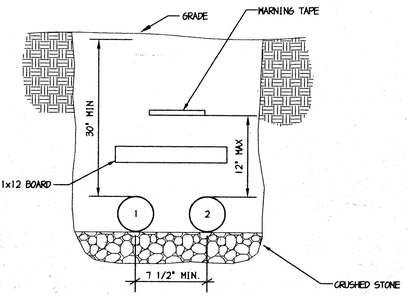
March 01, 1995 8:50:47 a.m.



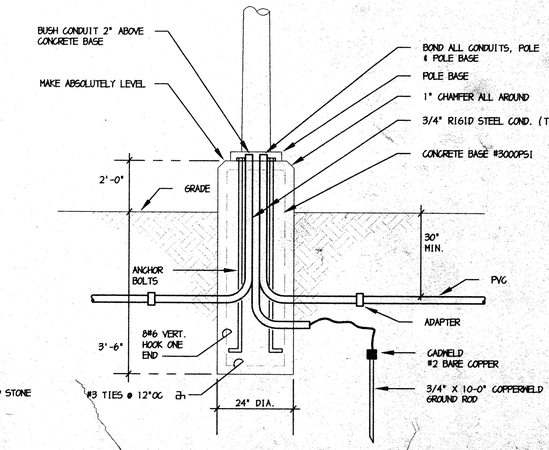
1 / E1.1 SITE PLAN - ELECTRICAL
SCALE : 20' = 1"



2 / E1.1 DETAIL - DUCTBANK
NOT TO SCALE



3 / E1.1 TRENCH DETAIL
NOT TO SCALE



4 / E1.1 DETAIL - POLE BASE
NOT TO SCALE

March 01, 1995 8:53:49 a.m.
Drawing: P:\PROJECTS\6096_00\E\6096E1-1.DWG
Xrefs: 6096TBLK.DWG

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
□ The Wallace Building 842 N. Broad Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3530
□ 53 Haddonfield Road Suite 306 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
□ 3711 Briarpark Suite 320 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
□ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1... FAX (703)...

PHR&A
Patton Harris Rust & Associates, pc Professional Engineers, Landscape Architects 3999 Pender Drive, Suite 600 Fairfax, Virginia 22030 703-273-2700 Fax 703-385-3688

Construction Cost Systems, Inc.
CCS
11166 Main Street Fairfax, Virginia 22030 Suite 310 703-691-3662 Fax 703-691-2440

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

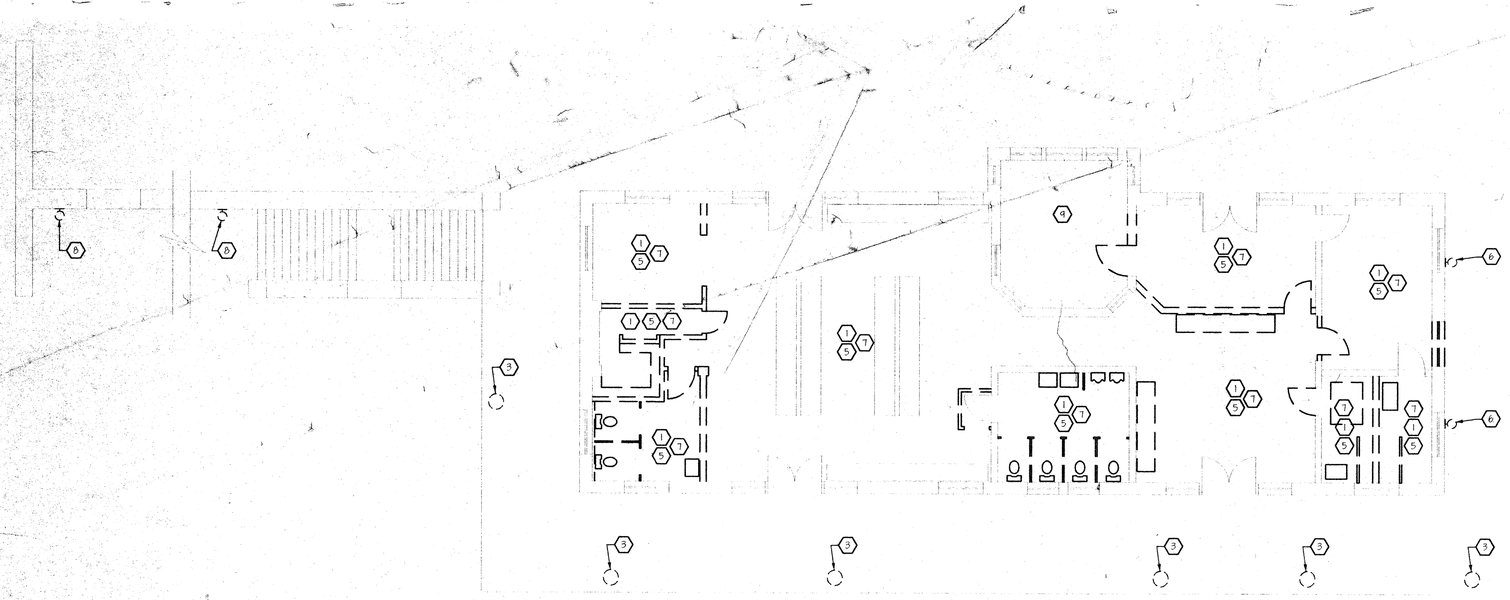
DRAWING TITLE
SITE PLAN - ELECTRICAL

SCALE	AS SHOWN
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
E1.1



1 / E2.1 FIRST FLOOR PLAN - DEMOLITION ELECTRICAL

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



2 / E2.1 BASEMENT FLOOR PLAN - DEMOLITION ELECTRICAL

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

ELECTRICAL DEMOLITION NOTES:

1. REMOVE ALL RECEPTACLES, LIGHT FIXTURES, JUNCTION BOXES, CONDUIT, WIRE AND ALL ASSOCIATED APPURTENANCES UNLESS OTHERWISE NOTED.
2. EXISTING PANELBOARDS, SERVICE FEEDER, METERING AND CIRCUIT BREAKERS TO REMAIN AND BE REUSED.
3. REMOVE EXISTING LIGHT STANDARD AND STORE FOR FUTURE REUSE. CAP EXISTING CONDUIT BELOW SLAB AND ABANDON IN PLACE.
4. REMOVE EXISTING WIRE AND CONDUIT FOR LIGHT STANDARD FEEDER FROM EXISTING PANEL TO INSIDE FACE OFF BASEMENT WALL, CAP CONDUIT AT BASEMENT WALL.
5. ALL EXISTING CONDUIT AND WIRE IN WALLS AND FLOORS TO REMAIN SHALL BE ABANDONED IN PLACE AND CAPPED BELOW FLOOR AND BEHIND WALLS.
6. REMOVE EXISTING LIGHT FIXTURES AND SAVE TO BE RELOCATED. CLEAN FIXTURES AND RE-LAMP. REPLACE BALLAST IF NECESSARY. REFER TO DRAWING E2.2 FOR NEW FIXTURE LOCATIONS. REMOVE ASSOCIATED WIRE, CONDUIT, JUNCTION BOXES AND ASSOCIATED APPURTENANCES. REPAIR ALL DAMAGE TO EXISTING WALLS DUE TO DEMOLITION.
7. DISCONNECT AND REMOVE ALL STARTERS, DISCONNECTS, FEEDERS, CONDUITS, JUNCTION BOXES AND ALL ASSOCIATED APPURTENANCES TO MECHANICAL EQUIPMENT SCHEDULE TO BE DEMOLISHED. COORDINATE WITH MECHANICAL CONTRACTOR.
8. ALTERNATE #1 REMOVE EXISTING LIGHT FIXTURE AND ASSOCIATED CONDUIT, WIRE, JUNCTION BOXES, ETC. BACK TO SOURCE.
9. E.C. SHALL IDENTIFY AND MAINTAIN EXISTING CIRCUITING FOR THIS AREA FOR DURATION OF PROJECT.

VITETTA GROUP

□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN

□ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)235-7900 FAX (215)235-3530

□ 53 Haddonfield Road Suite 305 Cherry Hill, NJ 08002 (609)667-1660 FAX (609)321-2009

□ 3711 Bironpark Suite 300 Houston, TX 77042 (713)784-4500 FAX (713)789-3052

□ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1660 FAX (703)683-1662

PHR&A

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners.
Suite 200, Bldg. II
3906 Raynor Parkway
Bowie, Maryland 20720
703-925-0700 Fax 703-352-3983

Construction Cost Systems, Inc.

CCS

11165 Main Street
Suite 200
Fairfax, Virginia 22030
703-691-2662 Fax 703-691-2480

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

BSMT. & 1ST. FLR PLANS - DEMOLITION ELECTRICAL

SCALE	1/8" = 1'-0"
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

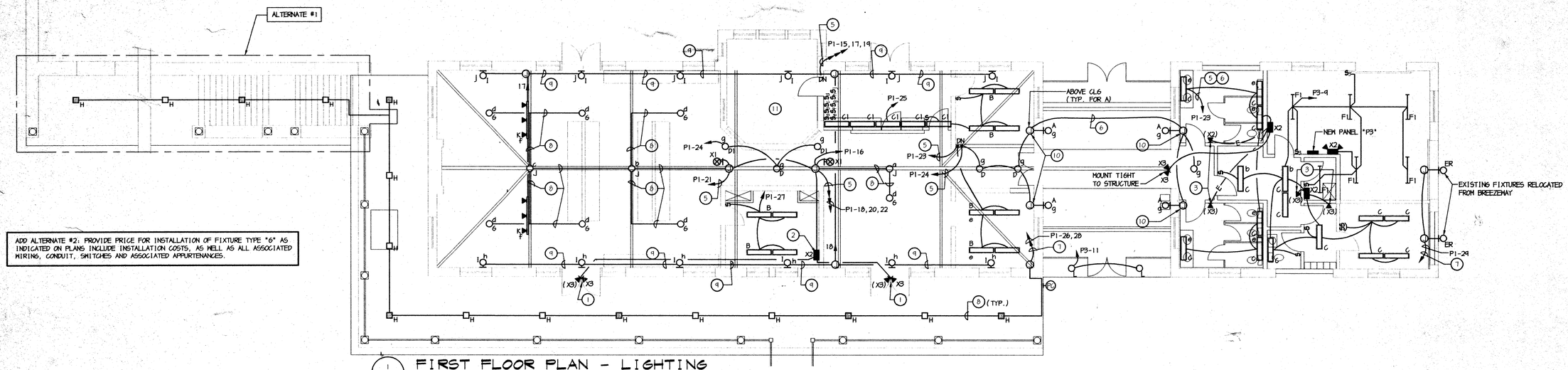
REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.

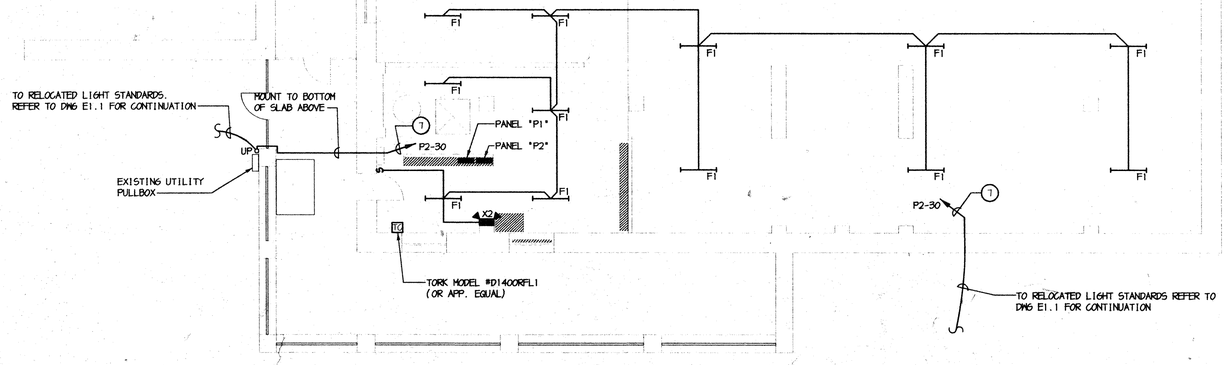
E2.1

March 01, 1995 8:36:32 a.m.
Drawing: P:\PROJECTS\6096_00\E\6096E2-1.DWG
Xrefs: BKG-DEMB.DWG BKG-DEM1.DWG 6096TBLK.DWG



1 / E2.2 FIRST FLOOR PLAN - LIGHTING

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

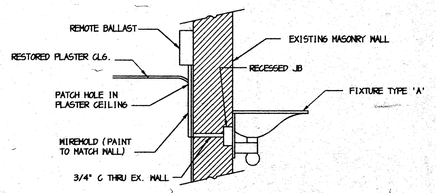


2 / E2.2 BASEMENT FLOOR PLAN - LIGHTING

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

NOTES:

1. REMOTE EMERGENCY HEAD CONNECTED TO FIXTURE X2 TO BE REMOTELY LOCATED. REFER TO ARCH. DETAILS FOR MOUNTING.
2. REFER TO DETAIL 1/E3.1 FOR MOUNTING INFORMATION.
3. REMOTE EMERGENCY HEAD CONNECTED TO FIXTURE X2 TO BE REMOTELY LOCATED. MOUNT ON WALL 6" BELOW FINISH CEILING.
4. JUNCTION BOX MOUNTED ABOVE FINISHED CEILING.
5. VIA SWITCH IN AMTRAK OFFICE, SWITCH VIA BASEMENT.
6. RUN WIRING IN CONDUIT BELOW SLAB.
7. CONNECT VIA PHOTOCELL AND TIMECLOCK.
8. CONDUIT MOUNTED TIGHT TO STRUCTURE ABOVE AND PAINTED TO MATCH SURROUNDINGS. SEE DETAIL 5/E3.1, FOR ADDITIONAL INFORMATION.
9. RUN CONDUIT ABOVE CORNICE OUT OF VIEW FROM BELOW.
10. MOUNT REMOTE BALLAST FOR FIXTURE "A" ABOVE CEILING.
11. VERIFY CURRENT BREAKERS FEEDING THIS AREA, E.C. SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING CIRCUITS TO THIS AREA.



1a / E2.2 FIXTURE TYPE 'A' MOUNTING DETAIL

NONE

March 01, 1995 7:59:05 a.m.
Drawing: UNNAMED.DWG
Xrefs: 6096TBLK.DWG

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
The Wallace Building 1 Penn Center 1600 Duke Street, Suite 300
1315 Walnut Street 3711 Bronpark Drive 53 Haddonfield Road Cherry Hill, NJ 08002 Houston, TX 77042 Philadelphia, PA 19130 (609)321-2000 (713)789-9141 (215)235-3500 FAX (609)321-2009 FAX (713)789-3052 FAX (215)235-3530
Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662

PHR+A
Patton Harris Rust & Associates, pc Engineers, Surveyors, Landscape Architects 8180 Greensboro Drive, Suite 200 Tysons Corner Center PO Box 601 Fairfax, Virginia 22030 703-573-8700 Fax 703-560-3983

Construction | Cost | Systems, Inc.
C|C|S
11160 Main Street Suite 300 Fairfax, Virginia 22030 703-691-2662 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

BSMT. & 1ST. FLR PLANS - LIGHTING

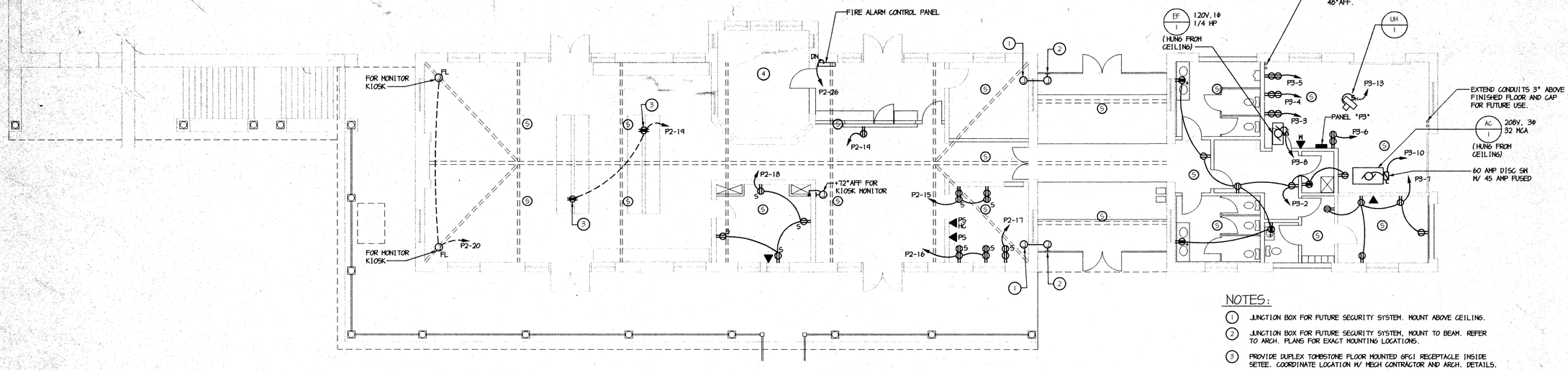
SCALE	1/8" = 1'-0"
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.

E2.2

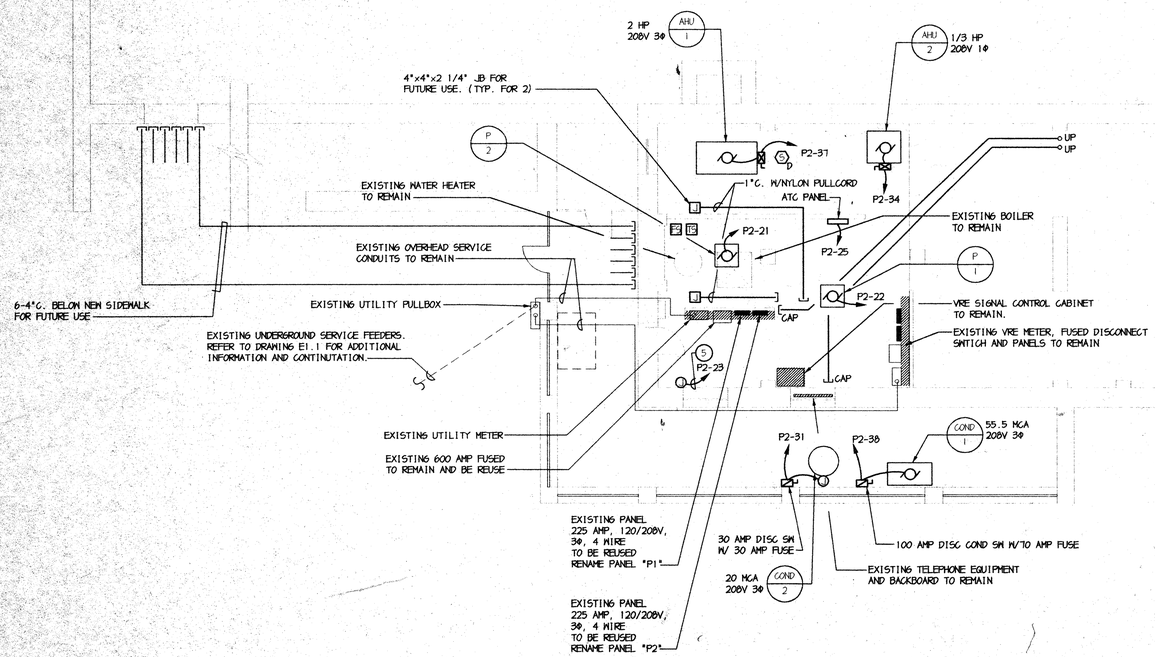


1 / E2.3 — FIRST FLOOR PLAN - POWER & SIGNAL

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

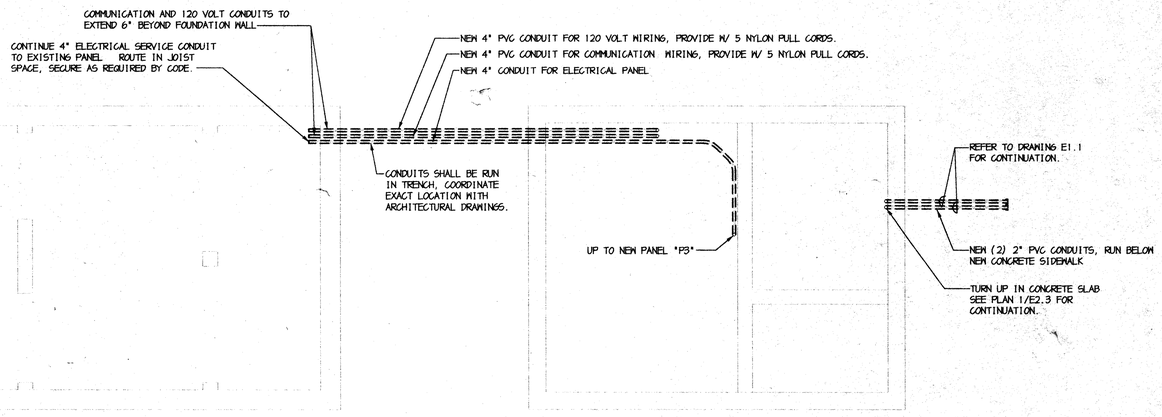
NOTES:

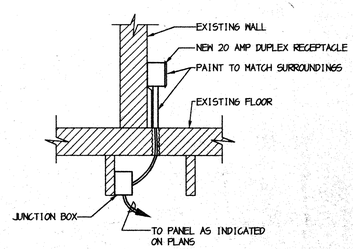
1. JUNCTION BOX FOR FUTURE SECURITY SYSTEM. MOUNT ABOVE CEILING.
2. JUNCTION BOX FOR FUTURE SECURITY SYSTEM, MOUNT TO BEAM. REFER TO ARCH. PLANS FOR EXACT MOUNTING LOCATIONS.
3. PROVIDE DUPLEX TOMBSTONE FLOOR MOUNTED GFCI RECEPTACLE INSIDE SETEE. COORDINATE LOCATION W/ MECH CONTRACTOR AND ARCH. DETAILS.
4. VERIFY CURRENT BREAKERS FEEDING THIS AREA, E.G. SHALL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING CIRCUITS TO THIS AREA.
5. MOTOR OPERATED DAMPERS SHALL BE INTERLOCKED WITH AIR HANDLING UNITS. COORDINATE WITH MECHANICAL DRAWINGS AND SYSTEM REQUIREMENTS.



2 / E2.3 — BASEMENT FLOOR PLAN - POWER & SIGNAL

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





3 / E2.3 — DETAIL - NEW RECEPTACLE INSTALLATION

SCALE : NTS.

March 01, 1995 7:59:05 a.m.
Drawing: UNNAMED.DWG
Xrefs: 6096TBLK.DWG

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
□ The Wallace Building 642 N. Broad Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3535
□ 53 Hoddonfield Road Suite 306 Voorhees, NJ 08002 (609)321-2000 FAX (609)321-2009
□ 3711 Briarpark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
□ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1662

PHR&A
Peters Harris Root & Associates, pc Engineers, Surveyors, Landscape Planners 2668 Phil Ridge Drive PO Box 6901 Leesburg, VA 22075 703-275-9760 Fax 703-368-3883

Construction Cost | Systems, Inc.
C|C|S
11166 Main Street Suite 200 Fairfax, Virginia 22030 703-691-2660 Fax 703-691-2440

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

BSMT. & 1ST. FLR PLANS - POWER & SIGNAL

SCALE	1/8" = 1'-0"
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.

E2.3

PANEL IDENTIFICATION		ROOM: ELEC'T BSMT	VOLT: 120/208	175 AMP MAIN BUS
P1 EXISTING		FLOOR: E2.3	PHASE: 3	175 AMP MCB
		MOUNTING: SURFACE	WIRE: 4	
			KAIC:	

CKT NO.	CIRCUIT DESCRIPTION	AMG	KVA	CB	Φ	CB	KVA	AMG	CIRCUIT DESCRIPTION	CKT NO.
1	SPARE/EXISTING				A				SPARE/EXISTING	2
3	SPARE/EXISTING				B				SPARE/EXISTING	4
5	SPARE/EXISTING				C				SPARE/EXISTING	6
7	SPARE/EXISTING				A				SPARE/EXISTING	8
9	SPARE/EXISTING				B				SPARE/EXISTING	10
11	SPARE/EXISTING				C				SPARE/EXISTING	12
13	SPARE/EXISTING				A				SPARE/EXISTING	14
15	LT6 (SWITCH h)	12	0.90	20/1	B	20/1	1.00	12	EMERGENCY LT6	16
17	LT6 (SWITCH f)	12	0.90	20/1	C	20/1	1.00	12	LT6 (SWITCH a)	18
19	LT6 (SWITCH j)	12	0.90	20/1	A	20/1	1.00	12	LT6 (SWITCH b)	20
21	LT6 (SWITCH d)	12	0.70	20/1	B	20/1	1.00	12	LT6 (SWITCH c)	22
23	LT6 (SWITCH e)	12	1.00	20/1	C	20/1	0.90	12	LT6 (SWITCH g)	24
25	LT6 OFFICE	12	1.00	20/1	A	20/1	1.30	12	LT6 CANOPY	26
27	LT6 OFFICE	12	0.50	20/1	B	20/1	1.60	12	LT6 CANOPY	28
29	LT6 EXTERIOR	12	0.50	20/1	C	20/1	1.60	12	SITE LT6	30
31	SPARE			20/1	A	20/1		12	SPARE	32
33	SPARE			20/1	B	20/1		12	SPARE	34
35	SPARE			20/1	C	20/1		12	SPARE	36
37	NEW PANEL P3	*	12.00	100/3	A	20/1		12	SPARE	38
39			12.00		B	20/1		12	SPARE	40
41			12.00		C	20/1		12	SPARE	42

CONNECTED (KVA)

LIGHTING	15.80
RECEPTACLE	
HEATING	
AIR CONDITIONING	
MISCELLANEOUS	36.00
TOTAL	51.80

* 4 # 2, 1 # 8 GRD SEE PLAN FOR CONDUIT SIZE.

PANEL IDENTIFICATION		ROOM: ELEC'T BSMT	VOLT: 120/208	175 AMP MAIN BUS
P2 EXISTING		FLOOR: E2.3	PHASE: 3	175 AMP MCB
		MOUNTING: SURFACE	WIRE: 4	
			KAIC:	

CKT NO.	CIRCUIT DESCRIPTION	AMG	KVA	CB	Φ	CB	KVA	AMG	CIRCUIT DESCRIPTION	CKT NO.
1	EXISTING				A				EXISTING	2
3	EXISTING				B				EXISTING	4
5	EXISTING				C				EXISTING	6
7	EXISTING				A				EXISTING	8
9	EXISTING				B				EXISTING	10
11	EXISTING				C				EXISTING	12
13	EXISTING				A				EXISTING	14
15	RECEPT VENDING	12	0.40	20/1	B	20/1	0.40	12	RECEPT VENDING	16
17	RECEPT VENDING	12	0.40	20/1	C	20/1	0.90	12	RECEPT OFFICE	18
19	RECEPT GENERAL	12	1.10	20/1	A	20/1	1.50	12	KIOSH MONITOR	20
21	PUMP P-1 BSMT	12	0.90	20/1	B	20/2	0.90	12	PUMP P-2 BSMT	22
23	SPARE			20/1	C					24
25	SPARE			20/1	A	20/1	0.20	12	F/A CONTROL PANEL	26
27	MOTOR OP. DAMPER	12	1.00	20/1	B	20/1			SPARE	28
29	ATC PANEL	12	0.20	20/1	C	20/1			SPARE	30
31	COND #2	10	2.40	30/3	A	20/1			SPARE	32
33			2.40		B	20/2	1.10	12	AHU #2	34
35			2.40		C		1.10			36
37	AHU #1	12	2.60	20/3	A	70/3	6.70	4	COND #1	38
39			2.60		B		6.70			40
41			2.60		C		6.70			42

CONNECTED (KVA)

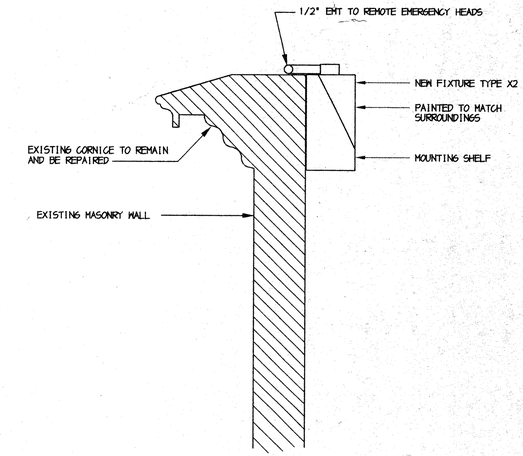
LIGHTING	
RECEPTACLE	6.50
HEATING	
AIR CONDITIONING	37.30
MISCELLANEOUS	1.40
TOTAL	45.20

PANEL IDENTIFICATION		ROOM: 116	VOLT: 120/208	100 AMP MAIN BUS
PANEL P3		FLOOR: FIRST	PHASE: 3	100 AMP MCB
		DMG: E2.3	WIRE: 4	
		MOUNTING: SURFACE	KAIC:	

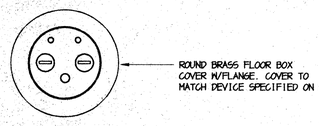
CKT NO.	CIRCUIT DESCRIPTION	AMG	KVA	CB	Φ	CB	KVA	AMG	CIRCUIT DESCRIPTION	CKT NO.
1	EMG RM 112	12	1.00	20/1	A	20/1	1.40	12	RECEPT RM 115A	2
3	RECEPT RM 116	12	0.40	20/1	B	20/1	0.40	12	RECEPT RM 116	4
5	RECEPT RM 116	12	0.40	20/1	C	20/1	0.40	12	RECEPT RM 116	6
7	RECEPT RM 117	12	0.90	20/1	A	20/1	1.00	12	EF-1 RM 116	8
9	LT6 RM 116	12	1.30	20/1	B	40/3	4.00	8	AC-1 RM 116	10
11	SPARE			20/1	C		4.00			12
13	SPARE			20/1	A		4.00			14
15	SPARE			20/1	B	20/1		12	SPARE	16
17	SPARE			20/1	C	20/1		12	SPARE	18

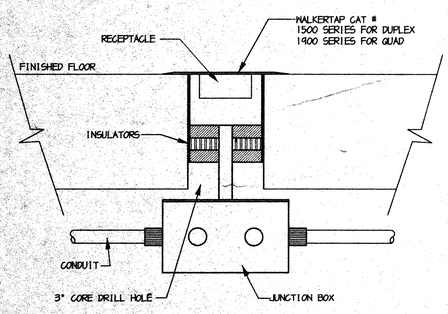
CONNECTED (KVA)

LIGHTING	1.30
RECEPTACLE	4.90
HEATING	
AIR CONDITIONING	13.00
MISCELLANEOUS	
TOTAL	19.20

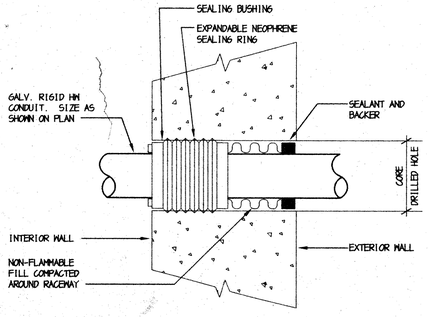


1/E3.1 FIXTURE TYPE "X2" MOUNTING DETAIL
NOT TO SCALE

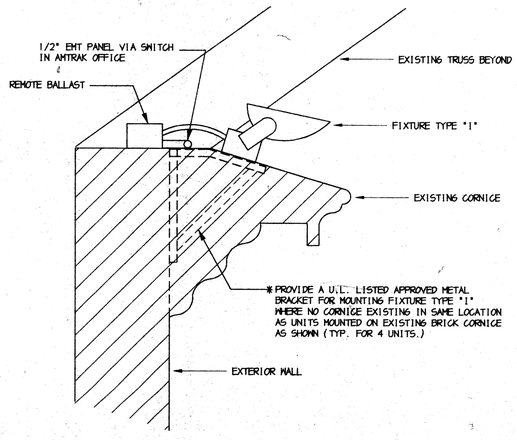




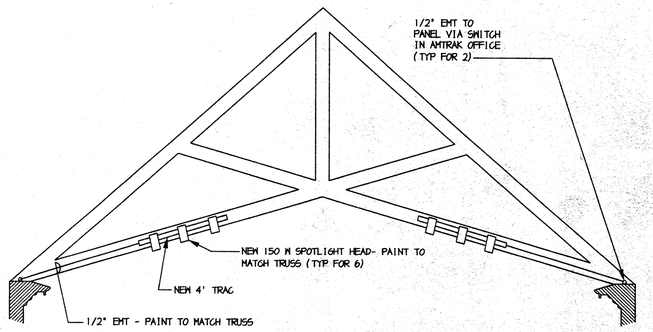
2/E3.1 POKE - THRU FLOOR BOX
N.T.S.



3/E3.1 THRU-WALL PENETRATION
NOT TO SCALE



4/E3.1 FIXTURE TYPE "I" MOUNTING DETAIL
NOT TO SCALE



5/E3.1 FIXTURE TYPE "K" MOUNTING DETAIL
NOT TO SCALE

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wallace Building 142 N. 3rd Street Philadelphia, PA 19130 (215)235-3500 FAX (215)235-3535
☐ 53 Haddonfield Road Suite 400 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 3711 Briarpark Suite 100 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-6001 FAX (703)683-1682
VITETTA GROUP

PHR&A
Patton Harris Rust & Associates, pc
Engineers Surveyors Planners
Landscape Architects
8484 Westpark Drive, PO Box 901
Fairfax, Virginia 22030
703-573-6700 Fax 703-362-3866

Construction | Cost | System, Inc.
CCS
11166 Main Street
Suite 400
Fairfax, Virginia 22030
703-591-7886 Fax 703-591-2480

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
PANEL SCHEDULES AND DETAILS

SCALE	AS SHOWN
DRAWN	JPE
CHECKED	JPR
APPROVED	
DATE	06/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
E3.1

March 01, 1995 8:44:19 a.m.
Drawing: P:\PROJECTS\6096_00\E\6096E3-1.DWG
Xrefs: 6096TBLK.DWG

GENERAL REQUIREMENTS FOR ELECTRICAL WORK

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification Sections, apply to the work of this Section.

1.02 DESCRIPTION OF WORK

A. The work shall include materials, equipment, and systems included as Division 16, shown on the drawings and work for other Divisions required to complete the work ready for operation.

B. Contractor shall provide labor, material, equipment, and services for the proper installation and operation of the electrical work as indicated on the Drawings and as specified.

C. Labor, material, equipment, and service obviously necessary for the proper installation and operation of electrical systems, although not specifically mentioned or shown, shall be provided.

D. No consideration or allowance shall be granted for alleged misunderstanding of the Contract Documents and the work to be performed.

1.03 REFERENCE, CODES AND SPECIFICATIONS

A. Electrical work shall conform with the latest edition of the National Electrical Code and applicable laws, codes and regulations of municipal, county, state, federal authorities, utility companies, insurance agencies and other authority having jurisdiction over the work.

B. Materials, equipment, installation and procedures shall be in accordance with the applicable requirements of the current reference standards, codes and specifications listed below.

C. Abbreviations:

1.	ANSI	American National Standards Institute
2.	ASTM	American Society for Testing Materials
3.	CS	Commercial Standards
4.	FS	Federal Specifications
5.	IEEE	Institute of Electrical and Electronic Engineers
6.	IES	Illuminating Engineering Society
7.	NEC	National Electrical Code
8.	NECA	National Electrical Contractors Association
9.	NEMA	National Electrical Manufacturers Association
10.	NFPA	National Fire Protection Association
11.	UL	Underwriter's Laboratory
12.	NESC	National Electrical Safety Code
13.	IGEA	Insulated Cable Engineers Association
14.	EEI	Edison Electrical Institute
15.	EIA	Electronic Industry Association

1.04 PERMITS AND FEES

A. Obtain, pay for and deliver permits and certificates of inspection as required by the authorities having jurisdiction. Deliver certificates to the Owner prior to final Acceptance of the work. An electrical inspection certificate for each class of work requiring inspection, must be submitted prior to or with the final payment invoice. Contractor must make application for the inspection, coordinate same, and pay the required inspection fee.

1.05 FIELD CONDITIONS

A. Before submitting his bid, Trade Contractor shall verify existing conditions in the field. Failure to do so shall not relieve Trade Contractor of his obligation to pay for costs that may be incurred due to conditions that may affect the cost of installing his work.

B. Before ordering material or doing work, the Trade Contractor shall check and verify measurements, including lines, grades, pipe and duct elevations at the building and shall be responsible for the correctness of same. No extra compensation shall be allowed on account of differences between actual dimensions measured and those indicated on the Drawings. Significant differences which may be found shall be submitted to the Architect/Engineer for consideration before proceeding with the work.

1.06 TERMINOLOGY

A. "Trade Contractor" when used in Division 16 refers to the Trade Contractor responsible for all work under Division 16.

B. "Provide" shall mean furnish and install, make final connections and leave in a proper operating condition.

C. "Furnish" shall mean to obtain and deliver to the job site and deposit where directed.

D. "Electrical Work" or "work" shall mean labor, transportation, material, equipment, scaffolding, rigging, tools, supervision, services, and other incidental items or services necessary for a complete and operable installation.

E. "Wiring" shall include the conductors, raceways, and connections to the equipment, apparatus, outlets and other specialties.

F. "Conductor", "wire", and "cable" shall mean insulated conductor.

1.07 CONTRACT DRAWINGS

A. The Drawings accompanying this specification form a part of this Specification upon which the work shall be based. Drawings are not to be scaled.

B. The electrical systems are indicated on the Drawings.

C. Drawings are diagrammatic, small scale and indicate the general arrangement of systems and work included. However, certain raceways, bends, fittings, boxes, system components, appurtenances and related specialties are not shown, but shall be provided to insure a complete installation.

D. Consult the Drawings for exact location of fixtures and equipment. Where same are not definitely located, obtain this information from the Architect/Engineer.

1.08 INTENT

A. It is the intention of the drawings and specifications to call for clean finished work, tested, and ready for operation.

B. Incidental accessories necessary to make the work complete and ready for operation, even if not particularly specified or shown, shall be provided without additional expense. Minor details not usually shown or specified, but manifestly necessary for the proper installation and operation of the various systems, shall be included in the work, the same as if specified or shown on the Drawings. No such departures shall be made without prior written review.

C. The Contractor shall be responsible for assuring that his proposed systems can be installed as required from the Drawings and Project Manual. If any departures from the Drawings and Project Manual are deemed necessary by the Contractor, details of such departures and the reasons therefore shall be submitted for the Architect/Engineer's review.

D. No consideration or allowance shall be granted for alleged misunderstanding of materials and equipment to be furnished for work to be accomplished.

1.09 SINGULAR NUMBER AND IDENTICAL ITEMS

A. A reference made to any item in the singular number shall apply equally to as many identical items as the work requires to complete the installation.

B. Electrical work required for identical items shown on the Drawings of any Division shall be provided although each specific identical item may not be shown on the Division 16 drawings.

1.10 EXTENDED WARRANTIES

A. Work furnished under the Contract shall be warranted against defects in workmanship and materials for a period of not less than one (1) year, or as otherwise specified, from the date of Final Acceptance of the installation. Defects of workmanship developing during this period shall be remedied, and defective material replaced, without additional cost.

B. Trade Contractor shall warrant that the installation when operated in accordance with his instructions shall develop capacities and characteristics indicated or specified and shall fulfill each and every requirement of the Project Manual and Drawings, and should any part of the installation fail to do so, the Trade Contractor shall without delay and without cost provide whatever additional equipment, material, and labor necessary to correct the faulty installation, and demonstrate complete compliance with these requirements.

C. The Trade Contractor shall warrant that defects in workmanship, materials or performance, and damage caused by such defects, shall be repaired and replaced within a reasonable time to be specified by notice. In default thereof, the Trade Contractor hereby agrees that such work may be done by others and the costs charged to the Trade Contractor.

1.11 SUBMITTALS

A. Submittals shall be in accordance with Division 1. The equipment, materials, installation, workmanship, and arrangement of work is subject to review and acceptance. Submittals that do not meet Division 16 requirements shall be rejected. Submit for review in clear and legible form, the following items:

1. Material and Equipment List.
2. Descriptive Data.
3. Shop Drawings.
4. Installation and Coordination Drawings.
5. Project Record Drawings, Division 16.
6. Equipment Operating and Maintenance Manuals.

PART 2 PRODUCTS

2.01 GENERAL

A. Material and equipment in the work shall be new, first grade, the best of their respective kinds, and appropriate for the application and environment.

B. Equipment or apparatus for any one system shall be the product of one manufacturer. The term "manufacturer" shall be understood as applying to a company of established reputation in the manufacture of a particular piece of equipment or apparatus from products of his own make or others, and who assumes full responsibility for products used in such equipment or apparatus. The manufacturer must submit evidence of five (5) years or more manufacturing experience in the production of these products.

C. Material or equipment specified by manufacturer, brand name, type, or catalog number, are designed to establish standards of desired quality, style, performance, electrical, mechanical and physical characteristics, and dimensions.

D. Where Trade Contractor proposes to use equipment or material other than that used as the basis for design, which requires redesign or relocation of the structures, foundations, partitions, piping, raceways, wiring or other part of the Mechanical, Electrical, Structural, or Architectural work, such redesign and the new drawings and details required shall be prepared by the Contractor at his own expense and submitted for Architect/Engineer's review. Where such approved deviation results in additional Mechanical, Electrical, Structural, or Architectural work, or work for another trade, such additional work and additional equipment for these systems shall be subject to Architect/Engineer's review and shall be provided at the expense of the Trade Contractor.

E. When directed by the Architect/Engineer the Trade Contractor shall furnish the following information:

1. For each proposed substitute item, the Trade Contractor shall furnish a written document explaining in detail how the substitute item is equal to the specified item including the following: dimensions, mounting, electrical and operating characteristics, performance data, fabrication materials, finishes, operational features, space requirements, and photometric data for lighting fixtures.
2. The Trade Contractor's cost for each specified item and each proposed substitute item shall be included.

2.02 WIRE AND CABLE

A. Wire and cable for site distribution, power, lighting, control, signal circuits, etc., shall have copper conductors of not less than 98 percent conductivity and shall be insulated to 600V. Conductor sizes No. 10 AWG and smaller shall be solid, conductor sizes No. 8 AWG and larger shall be stranded.

B. Type of wire and cable for the various application shall be as follows:

1. Type THWN (75 degrees C.): Use for branch circuits, panel and equipment feeders in wet locations.
2. Type THHN (90 degree C.): Use for branch circuits, panel and equipment feeders in dry location only.

C. Connectors

1. In-line splices and taps for conductor sizes No. 8 AWG and smaller; use 3M Co. "Scotchloc" vinyl insulated spring connectors, or by Substitution.
2. In-line connectors for conductor sizes No. 6 AWG and larger; use O-Z Manufacturing Co. Type "KM" pressure connectors, with Type "KMC" covers, or by Substitutio.
3. Taps for conductor sizes No. 6 AWG and larger; use O-Z Gedney Manufacturing Co. Type "PMX" parallel gutter taps, with Type "PMXC" covers where they can be used within their UL voltage rating, or by Substitutio.
4. Cable terminations to busbars, switch studs and terminal blocks; use O-Z Manufacturing Co. "Shurelug" solderless lugs, or by Substitution.
5. Insulate splices and taps to thickness of conductor insulation minimum with half-lapped layers of 3M "Scotch" brand No. 33 vinyl electrical tape. Connectors having irregular surfaces; Fill voids and smooth contours with 3M "Scotchfil" electrical putty prior to applying tape.

2.03 RACEWAY

A. Rigid Steel Conduit

1. Rigid steel conduit shall be full weight, heavy wall steel pipe with a zinc protective coating conforming to the latest edition of Federal Specification WW-C-581E. Manufacturers: Republic, National, Triangle, Allied.
2. Fittings for rigid steel conduit shall be cast or malleable iron, conforming to Federal Specification W-F-406 and shall be cadmium or zinc-coated. Manufacturers: Thomas and Betts Company, Pyle-National, Crouse-Hinds, Appleton.
3. Seal fittings shall be Crouse-Hinds "EY" or "EZ" Series.

B. Intermediate Metal Conduit (IMC)

1. Intermediate metal conduit shall confirm to the latest edition of Federal Specifications WW-C-581. Manufacturers: Allied, Triangle,
2. Fittings shall be the same as specified for rigid steel conduit.

C. Electric Metallic Tubing (EMT)

1. Electrical metallic tubing shall be standard galvanized or sheradized thin walls steel conduit conforming to the latest edition of FS WW-C-563. Manufacturers: Republic, National, Triangle, Allied.
2. Fittings for electrical metallic tubing shall be rain-tight and concrete-tight compression type or steel set screw type, if approved, same material as EMT. Manufacturers: O-Z Gedney Company, Appleton, Raco.

D. Flexible metal conduit

1. Flexible metal conduit shall be zinc coated sheet metal strips in interlocked construction conforming to the latest edition of FS WW-C-566. Provide liquid-tight conduit where required. Manufacturers: Sealtite, Triangle.
2. Fittings for flexible metal conduit shall be iron or steel, cadmium or zinc coated conforming to FS W-F-406. Manufacturers: Thomas and Betts Company, Crouse-Hinds Type LT Series.

E. Polyvinyl Chloride (PVC)

1. PVC conduit shall be schedule 40 or 80 with couplings and fittings of same material.

F. Surface Metal Raceway

1. Surface metal raceway shall be the approved equal of Miremold 6-3000. Provide wire clips, couplings, support clips, entrance end fittings, device brackets, covers and other apparatus required for a complete installation.

6. Locknuts and Bushings

1. Locknuts shall be Thomas and Betts No. 141 series or by Substitutio.
2. Insulated bushings shall be O.Z. Company Type "A" or by Substitutio.
3. Expansion fittings shall be O.Z. Company Type "AX", "AXB", "EX", "TX" or Crouse-Hinds Series XD.
4. Grounding and Bonding Bushings shall be T & B Series 3800 or also manufactured by Burndy, EFCOR.

H. Sleeves

1. Sleeves in membrane waterproof construction shall be Josam Series 1080 with top and bottom steel pipe sleeves, pressure bolts, and flashing clamp attached to membrane.
2. "Poke-through" shall be "UL" labeled as manufactured by Crouse-Hinds, Square "D" or Hubbell.
3. Use 3M CP 25 fire barrier caulk to maintain fire rating of walls and floors where penetrated.

2.04 OUTLET BOXES

A. Material, size and installation for outlet boxes shall comply with NEC, Article 370.

B. Boxes shall be Raco, Steel City or Appleton; catalogue numbers based on Raco, unless otherwise indicated. In general the type of boxes shall be as follows:

1. In stud walls; for single outlet use 4 inches square by 2-1/8 inches deep box No. 232 or 233. For ganged outlets use 4-1/2 inches high by 1-5/8 inches deep multiple gang boxes No. 451 through No. 456. Boxes to be provided with raised covers of depth as required for thickness of wall materials.
2. In masonry and poured concrete walls; for single outlets requiring two conduit connections in top and bottom of box use 4 inches square by 2-1/8 inches deep box No. 232 or 233 with raised square cut cover. For ganged outlets use 3-3/4 inches high by 2-1/2 inches deep multiple gang masonry boxes No. 641 thru No. 644 and No. 460 thru No. 464.
3. Surface mounted wall outlets; for single outlet use 2-1/8 inches deep handy box No. 674, for two outlets use 4 inches square by 2-1/8 inches deep box No. 232 or 233. For more than two ganged outlets use 3-3/4 inches x 2-1/2 inches deep multiple gang masonry boxes No. 642 through No. 644 and No. 460 through No. 464. Boxes to be provided with 1/2 inch raised cover as required for device.
4. In suspended ceilings; use 3-1/2 inches deep octagon box No. 280 or No. 281 with fixture studs and steel mounting bars.
5. Switch outlets in door jams; use partition boxes No. 426 for single switch, for two switches use No. 426 two gang tandem box, for three switches use No. 428 three gang tandem box.

2.05 PULL AND JUNCTION BOXES

A. Construction, sizes and installation of pull and junction boxes shall comply with NEC, Article 370.

B. Pull and junction boxes not specifically described in NEC, Article 370, shall be fabricated of code gauge galvanized steel with screw covers, brass screws and hardware with enamel finish.

C. Pull and junction boxes for installation in poured concrete floors shall be flush type, cast iron, with watertight gasketed covers.

D. Pull and junction boxes for outdoor installations shall be raintight.

E. Auxiliary Gutters

1. Construction, sizes and installation of auxiliary gutters shall comply with NEC, Article 374.

2.06 RECEPTACLES AND SWITCHES

A. Duplex, 20 ampere, 125 volt, 2 pole, three wire grounding type with NEMA-5-20R configuration, brown face specification grade with provisions for back or side wiring.

1. Architect/Engineer shall have the option of specifying other colors.

B. Single, 20 ampere, 250 volt, 2 pole, three wire grounding type with NEMA 6-20R configuration, brown face specification grade with one matching plug for each receptacle.

C. Single, 30 ampere, 125/250 volt, 3 pole, three wire with NEMA 10-30 R configuration. Furnish one matching plug for each receptacle.

D. Single 50 ampere, 250 volts 3 pole, four wire grounding type with NEMA 15-50R configuration. Furnish one matching plug for each receptacle.

E. Ground fault receptacle, feed through type, brown face specification grade, duplex, 20 amperes, 120 volts, 2 pole, three wire grounding, vertical configuration.

1. Architect/Engineer shall have the option of specifying other colors.

F. Receptacles of the same type shall be by the same manufacturer.

6. Receptacles in visitors areas shall be safety type to prevent insertion of foreign objects.

H. Provide transient voltage surge suppressors (TVSS) as shown on drawings. TVSS shall be duplex type with isolated ground, NEMA configuration 5-20R, 125V 20A. Receptacle shall have ivory color and LED indicator light. Receptacle shall be the approved equal of Pass & Seymour Cat. No. 16 8362-ISP and shall meet the following standards:

1. UL 1449
2. IEEE 587/ANSI 62.41
3. CSA C22.2 Number 8-M 1986

I. Switches shall be specification grade, in accordance with latest edition of Federal Specification W-S-896.

J. Switches shall be brown handle, quiet type, combination back and side wired, toggle switches.

1. Architect/Engineer shall have the option of specifying handles of other standard colors.

K. Switches shall be single pole, two pole, 3- or 4-way as the control demands, rated not less than 20 amperes, 120-277 volts AC.

L. Switches shall be furnished with key locks, pilot lights or other devices when shown on the drawings.

2.07 PLATES AND COVERS

A. Plates shall be specification grade except as otherwise noted.

B. Plates shall be impact resistant thermoplastic unless otherwise directed.

C. Plates shall be attached to outlet box with flush oval head machine screws, set true and plumb against wall. Screws shall be same finish as plates.

1. Provide spanner type tamper-proof screws for areas requiring security type devices. Furnish two (2) special screwdrivers for use with screws.

D. For exposed "FS" or "FD" conduilet installation, provide cast aluminum "DS" plates.

2.08 PANELBOARDS

A. Panelboards shall be manufactured by Westinghouse Electric Corporation, General Electric Co., Square "D" Co., or by Substitution.

B. Interiors shall be completely factory assembled. They shall be so designated that switching and protective devices can be replaced without disturbing adjacent units and without removing the main bus connectors, so that circuits may be changed without machining, drilling or tapping.

Branch circuits shall be arranged using double row construction except when narrow column panels are indicated. A nameplate shall be provided listing panel type and ratings.

Unless otherwise noted, full size insulated neutral bars shall be included. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of the branch circuit devices. Neutral bussing shall have a suitable lug for each outgoing feeder requiring a neutral connection. A ground bus shall be included in panels.

C. Boxes shall be at least 20 inches wide made from galvanized steel. Provide minimum gutter space in accordance with National Electric Code. Where feeder cables supplying the mains of a panel are carried through its box to supply other electrical equipment, the box shall be sized to include the additional required wiring space. At least four interior mounting studs with adjustable nuts shall be provided.

D. Switching device handles shall be accessible. Doors and panelboard trims shall not uncover any live parts. Doors shall have flush type cylinder lock and catch except doors over 48 inches in height shall have auxiliary fasteners top and bottom of door in addition to the flush type cylinder lock and catch. Panelboards switching devices with individual dead front doors shall be acceptable or instead of standard door in trim design. Panelboard trim clamps shall be of the indicating type.

Door hinges shall be concealed. Locks shall be keyed alike; directory frame and card having a transparent cover shall be furnished with each door.

E. Exterior and interior steel surfaces of the trim shall be properly cleaned, primed with a rust inhibiting phosphatized coating and finish with a gray ANSI 61 paint. Trims for flush panels shall overlap the box by at least 3/4 inch all around. Surface trims shall have the same width and height as the box. Trims shall be mountable by a screwdriver without the need for special tools. After installation, trim clamps shall not be accessible when the panel door is closed and locked.

Conductors (Main Bus and Branch Connections)

1. Main bus bars shall be copper sized in accordance with UL standards to limit the temperature rise on current carrying parts to a maximum of 50 degrees C. above an ambient of 40 degree C. maximum.

F. LIGHTING AND RECEPTACLE PANELS

Panels for use at 240 volts AC maximum shall incorporate circuit breakers as shown rated a minimum 10K A.I.C. symetrical at 240 volts, or as indicated on documents. They shall be Westinghouse Type B108 or by Substitution.

Panels tested and listed in accordance with U.L. 67 and bearing an integrated short circuit rating shall be acceptable where system designs call for short circuit ratings of 22,000 A.I.C. 240 volts.

2.09 STARTERS AND DISCONNECT SWITCHES

A. Motor starters shall be three pole, 60 Hertz, full-voltage magnetic across the line type with NEMA 1 enclosures, as required. For exterior, damp, or wet locations, enclosures shall be NEMA 3R raintight.

1. Minimum size starter shall be NEMA size 1.

B. Starters shall be of the combination fused, circuit breaker or motor circuit protector type as shown on the Drawings.

1. The short circuit interrupting rating of the protective device provided shall be higher than the available system short circuit capacity at the point of connection.

C. Starters shall be furnished complete with "hand-off-automatic" selector switches, pilot indicating lights, a minimum of two auxiliary convertible contacts an fuses unless otherwise noted. Include other equipment as required and as necessary for proper power operation including but not limited to the following:

1. Green pilot light for starter contacts "OPEN" or motor not running.
2. Red pilot light for starter contacts "CLOSED" or motor running.

D. Each magnetic starter shall have a 120 volt coil and a fuse for protection of control wiring. Each 240 volt starter shall have an individual control power transformer with primary fuses. Control power transformer shall have a VA rating sufficient to provide power for devices to be operated from transformer.

E. Circuit protection shall be provided by Class K-5, dual element current limiting fuses for fused starters, except as specified in paragraph 2.10.

F. Each starter shall be furnished complete with the proper quantity of ambient compensating thermal overload relays rated for the motor amperes. Overload relays, used with power factor corrected loads, shall be selected to compensate for the reduced line current due to the capacitor.

6. Thermal manual motor starting switches, for single phase motors, shall be manually operated toggle switches equipped with a melting alloy type thermal overload relay.

1. Thermal unit shall be interchangeable and starter shall be inoperative if thermal overload unit is removed.
2. Toggle switch shall be quick make and break type with self-indicating trip free handle.

H. Single phase motors, which are controlled by devices not rated for control of the motor, shall be provided with combination magnetic starters and accessories as specified in paragraph 2.01.

I. Pushbutton stations for remote motor starting shall be furnished with quantity of pushbuttons, the required number and type of contacts, pilot lights and other devices as shown on the Drawings or as required for the equipment being operated.

1. Pilot lights to be the same and coordinate with the lights specified in paragraph 2.01.G.
2. Furnish momentary type contacts unless otherwise shown.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wallace Building 642 N. Broad Street Philadelphia, Pa. 19130 (215)232-5255 FAX (215)235-3530
☐ 53 Hoddonfield Road Suite 306 Cherry Hill, NJ. 08002 (609)667-1660 FAX (609)321-2009
☐ 3711 Bronpark Suite 300 Houston, TX. 77042 (713)785-4444 FAX (713)785-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA. 22314 (703)683-1448 FAX (703)683-1449

Prime: PHR&A, Fellow, Reed & Associates, pc, Engineers, Surveyors, Planners, 3866 Fair Ridge Drive, Suite 200, Fairfax, Virginia 22033, (703)273-6700 Fax 703-934-3983

Construction Cost Systems Inc. CCS, 11161 Main Street, Suite 200, Fairfax, Virginia 22030, (703)591-2662 Fax (703)591-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

ELECTRICAL SPECS. 1 OF 2

SCALE	NONE
DRAWN	JPR
CHECKED	JPR
APPROVED	
DATE	08/26/96, 1995

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.

E4.1

J. Selector switches for equipment control shall be furnished with the number of switch positions, contact block arrangement and operating sequence as shown on the Drawings or as required for the proper operation of the equipment.

1. Pilot lights shall be provided when shown on the Drawings and shall be the same as the lights specified in paragraph 2.09G.

K. Control stations shall be heavy duty type NEMA Type 1 enclosures for indoor installation and NEMA Type 3R enclosures for outdoor installation.

H. Safety disconnect switches shall be horsepower rated heavy duty type, dual purpose cover interlock, positive, quick-make, quick-break mechanism, visible blades and line terminal shield. Switches shall include cartridge fuses where required. Handle shall have means of being padlocked in the "OFF" position and cover shall have means of being padlocked when closed.

1. Switches shall be furnished in NEMA 1, NEMA 3R or NEMA 4 enclosures as required.

2. Switches with the same rating shall be by the same manufacturer.

2.10 FUSES

A. Standard Single-element and Dual element fuses shall be rated for 250 volts, listed by Underwriters Laboratories, Inc., as Class K-5 fuses with I2t and IP values within U.L. prescribed limits. Single-element, non-renewable, one-time fuses shall have a minimum interruption rating of 50,000 RMS amperes. Dual-element, time-delay fuses shall be capable of carrying 500 percent of indicated amperes rating for a minimum of 10 seconds, with a minimum interrupting rating of 100,000 RMS amperes. Standard fuses shall have standard NEC dimensions. Fuses shall be as manufactured by Chase-Shawmut, General Electric Bussman or by substitution.

2.11 CIRCUIT BREAKERS

A. Circuit breakers shall provide inverse time delay and instantaneous circuit protection. The breakers shall be operated by a toggle type handle and shall have quick-make, quick-break over-center switch mechanism that is mechanically trip free from the handle so that the contacts cannot be held closed against short circuits and abnormal currents. Tripping due to overload or short circuits shall be clearly indicated by the handle automatically assuming a position midway between the manual ON and OFF positions.

B. Breakers must be completely enclosed in a molded case, with their covers sealed. Ampere ratings shall be clearly visible. Contacts shall be of non-welding silver alloy. Arc extinction must be accomplished by means of arc chutes, consisting of metal grids mounted in an insulating support. Circuit breakers shall be U.L. listed, conform to NEMA Standards Publications No. AB 1-1975, and meet the appropriate classifications of FS W-C-375B.

2.12 TRENCHING AND BACKFILL

A. Locate existing underground utilities which could interfere with the excavations for the underground work. Utility lines damaged shall be promptly replaced. All materials encountered shall be removed to accommodate work.

B. The Contractor shall be responsible for repairing or replacing surfaces disturbed during the excavation, backfilling and installation of the underground work.

C. Backfill shall be clean earth and shall be free from rocks, frozen earth, debris or other foreign materials. Backfill shall be deposited in uniform layers not over 6 inches thick and mechanically tamped before the next layer is applied. Backfill under walks, roads, driveways, pipes, and other underground specialties shall be compacted to 95 percent AASHO modified density.

D. Unpaved surfaces disturbed during the installation of underground utilities shall be restored to their original condition. Reconditioning work shall be done to the satisfaction of the Architect.

2.13 DUCTBANK

A. Concrete shall be composed of fine aggregate, coarse aggregate, portland cement, and water and mixed to produce a concrete with a compressive strength of 3000 psi at 28 days. Slump shall not exceed 3 inches. Retempering of concrete shall not be permitted, and shall be cured for a period of not less than 7 days.

B. Underground ductbanks shall be arrangements of single bore PVC conduit(Type EB where encased and Type DB where direct buried). Duct lines shall have a continuous slope toward manholes and away from buildings with a pitch of 3 inches in 100 feet. Changes in direction shall be accomplished by long sweep bends with a minimum radius of 10 inches for conduits of less than 3 inches in diameter and a minimum radius of 36 inches for conduits of more than 3 inches in diameter.

C. The joints of the conduits shall be made watertight by the proper application of joint sealant recommended by the conduit manufacturer.

D. Ductbanks shall be reinforced using 3/4 inch reinforcing rods deformed and complying with ASTM A615 grade 60. Reinforcing to be installed at bottom of the envelope, at each corner, midway between each duct and midway between bottom conduits.

E. Ductbank conduits terminating above grade and inside equipment cabinets shall terminate with rigid steel conduit.

2.14 GROUNDING

A. Contractor shall investigate the existing grounding system. All new work installed shall be grounded in accordance with the NEC. All existing equipment, if not properly grounded, shall be grounded in accordance with the NEC. Provide grounding busses, cables, ground rods and connections to water systems to insure a fully code compliant grounding system.

B. The grounding system shall be maximum 5 OHMS resistance. Provide all necessary grounding devices to achieve this value.

2.15 IDENTIFICATION

A. Identify electrical equipment by name, function, characteristics and control. Identify each circuit in panelboards on panel directories. Identify phase conductors of each feeder. Identify all electric rooms and closets.

B. Tags for feeders shall be equal to Thomas and Betts "Ty-Rap" white nylon straps. Identify all feeders at pull boxes, junction boxes and similar locations.

2.16 FIRE ALARM SYSTEM

A. Provide all equipment and materials necessary for the installation of the fire alarm signaling system as indicated on the drawings. The system shall include the master alarm control panel, duct smoke detectors, flow switch and tamper unit monitoring.

B. Coordinate the installation of the duct smoke detector and fan and damper control wiring with Division 1.

C. Equipment shall be U.L. listed as an integrated control system and shall meet the requirements of NFPA 72. The equipment furnished shall be as manufactured by Thorn Automated Systems or by substitution.

D. Actuation of the duct smoke detector shall cause the audible and visual alarm to sound on the main panel, and shall initiate the mechanical system shutdown sequence. Actuation of the tamper and flow switches shall cause the audible and visual alarm to sound on the main panel.

E. The master alarm control panel shall be the Thorn Firequest 200. The panel shall be a two zone control panel expandable to 14 zones. The panel shall be U.L. listed and shall operate at 24 volts DC and shall have internal 24 hour battery backup.

F. The Ionization duct smoke detectors shall be Thorn Autocall Series 350, Model No. 1SC350DIDC, and shall operate at 24 volts DC. The detector housing shall be designed for detection of combustion products and/or smoke in compliance with NFPA 90 A. The assembly shall consist of a housing to accommodate sampling tubes which extend into and across the duct of the ventilation system. The air handling unit shall be shut down by a signal from a relay in the duct detector housing.

6. Sprinkler system gate valve supervisions shall be provide by a Thorn Gate valve supervision module. Upon opening of the supervisory circuit, an audible and visual alarm in the control panel shall activate.

H. All fire alarm system wiring shall be installed in EMT.

2.17 LIGHTING

A. Provide light fixtures as listed in lighting fixture schedule or specified on drawings.

B. LAMPS

1. Fluorescent lamps shall be T8 warm white, unless otherwise noted in Fixture Schedule, with ratings required for each fixture. Lamps shall be energy conserving type compatible with the ballast furnished.

2. High intensity discharge lamps shall be of the type and rating required for each fixture. Furnish color corrected type high pressure sodium lamps.

3. Metal halide lamps shall be as manufactured by Sylvania, "Super-Metalarc-3K".

4. Incandescent lamps shall be inside frosted, reflector type, or as otherwise noted. They shall be the rating specified in the Fixture Schedule or as required to suit each fixture.

5. Lamps shall be as manufactured by General Electric, Sylvania, Philips, or by Substitution.
   a. Where a particular type lamp and manufacturer is shown, provide this lamp only.

C. BALLASTS

1. Fluorescent fixtures shall have electronic ballasts. Each ballast shall be provided with suitable protection, integral with the ballasts and conforming to the requirements of Article 410, Paragraph 71 of the National Electrical Code (Class "P"). Ballasts shall have an "A" sound rating, and UL, CBM, and Electrical Testing Laboratories certification. Except where otherwise indicated fluorescent lamps shall be of the rapid-start type. Ballasts shall be rated for use on 120 or 277 volts as required, 60 Hertz.

2. Ballasts for HID fixtures shall be high power factor, constant wattage type, of voltage specified and shall meet current ANSI specifications.

3. Ballasts for outdoor use shall be low temperature type (minus 20 degree F).

PART 3 EXECUTION

3.01 INSTALLATION OF CONDUCTORS

A. Great care shall be exercised in pulling wires into raceways so as not to injure the insulation. Only UL approved pulling compounds, such as Thomas and Betts Type "SNP, shall be used to assist in the pulling of wires.

B. Vertical cables shall be supported at intervals not greater than those listed in the NEC, Paragraph No. 300-19.

C. Splicing shall be within outlet boxes or junction boxes. No splicing shall be permitted in mains or feeders.

D. Connections of No. 8 AWG and larger shall be of the type indented into the conductor by means of a hand or hydraulic pressure tool.

E. Conductors No. 10 AWG and smaller shall be made electrically and mechanically secure with mechanical "twist" type connectors.

F. When oversized conductors are installed, and conductors do not fit properly into the distribution of utilization equipment provide junction box adjacent to equipment for tap change of conductor size from the junction box to the equipment tap conductor shall be as large as possible, and in no case shall its current carrying capacity be less than that required by the NEC.

6. Wires within equipment, such as panelboards, shall be neatly arranged and tied with cable ties.

H. Branch circuit conduits shall contain not more than one conductor of each phase (A, B, C) and neutral conductor, one equipment grounding conductor (if required), and associated switch or control wiring (if required), unless indicated otherwise.

I. Where cable passes through fire rated structures provide fireproof fittings.

3.02 RACEWAYS AND FITTINGS

A. Raceways shall be concealed in the construction except as otherwise specified or shown.

1. Raceways installed exposed or in accessible spaces shall be placed at right angles to or parallel with the building walls and ceilings.

2. Conduit runs installed in slabs or below grade shall be rigid steel conduit whenever the conduit exits to another space above grade.

B. Provide pull boxes as follows:

1. Where more than four 90 degree bends are required.

2. Not more than 100 feet apart.

C. Conduit bends shall be the long radius type. When sufficient area is not available for turning conduits without exposing them, adjust the conduit routing or provide compound bends so as to keep the conduit from being exposed.

D. Conduits shall be installed with a minimum separation of 6 inches between electrical raceways and hot water or steam lines. When installed at closer distance, provide insulating pipe covering on the hot water and steam lines.

E. Provide expansion fitting with bonding straps where raceways pass through expansion joints. Fitting shall permit construction movement in any direction without damage to raceway or fitting.

F. EMT shall not be embedded in concrete.

6. Where conduit terminates in a cabinet, box or auxiliary gutter, the conductors shall be protected by an insulating bushing. Locknuts shall be provided both inside and outside the enclosure.

H. Metallic conduits installed underground and terminating above grade shall be grounded. When conduit is not terminated with locknuts in contact with a grounded metal enclosure, a properly grounded grounding bushing shall be provided for each conduit.

I. Swab out and make raceways dry. Do not install wire until the area is protected from the weather and swabbing of raceways has been completed.

J. A pull wire shall be installed in empty raceways. Pull wire shall be 200 pound test nylon. Both ends shall be identified by means of labels or tags, reading "PULL WIRE" and giving the origination and termination points.

3.03 WIRING METHODS

A. Generally, wiring shall be done with insulated conductors in continuously grounded metallic raceways. Raceways shall be installed concealed in the construction, except in mechanical or electrical spaces, open construction areas or where shown on the Drawings.

B. Install wire and cables in rigid or steel intermediate metal conduit except for the following:

1. Electrical metallic tubing may be used for concealed branch circuit wiring above suspended ceiling and inside interior hollow walls and partitions.

2. Flexible metal conduit shall be used for connection to motors, transformers and other equipment which produces or transmits vibration or noise. Provide suitable bonding jumper at motor connections. Flexible metal conduit may be used in limited lengths, in instances where building construction does not permit the use of continuous rigid conduit. Liquid tight flexible metal conduit shall be used in wet or damp locations.

3. Rigid non-metallic conduit shall be used for exterior underground electrical work where shown on the Drawings.

C. Raceways shall be supported to comply with NEC.

D. Where telephones and computer outlets are shown, provide a single gang box with blank plate and electrical metallic tubing down to basement.

3.04 OUTLET BOXES

A. An outlet box shall be installed for each single device except where devices are ganged, in which case gang type boxes shall be used.

B. Surfacing materials shall be cut in straight lines to fit closely around the box and so placed that the wall plate shall be flush with the finished wall surface.

C. No "through-wall" boxes shall be permitted. Where Drawings indicate boxes back-to-back, or similar locations, such boxes shall be installed separately, space minimum six inches apart horizontally, and connected by conduit.

D. Provide cast rust-resisting metal type outlet boxes with gasketed covers in areas such as damp or wet locations, high humidity areas and on exterior of buildings.

3.05 JUNCTION AND PULL BOXES

A. Boxes shall be installed parallel with walls and ceilings, and shall be accessible.

B. Boxes shall be installed in the raceway systems to provide access to conductors for connections and for ease in installing conductors.

C. Each junction or pull box installed in buildings shall be permanently labeled in words with letters at least one inch high identifying each separate service in the box.

3.06 CUTTING AND PATCHING

A. Refer Architectural Specifications and drawings for requirements.

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
□ The Wallace Building □ 23 Haddonfield Road □ 3711 Bridgepark □ 1600 Duke Street
Suite 310 Suite 300 Suite 400
Philadelphia, PA 19130 Cherry Hill, NJ 08002 Drive, TX 77042 Alexandria, VA 22314
(215)235-3500 (609)321-2000 (713)789-3141 (703)683-1600
FAX (215)235-3530 FAX (609)321-2009 FAX (713)789-3052 FAX (703)683-1662

PHR&A
Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners
Landscape Architects
Suite 300 200 Harrison St. PO Box 801
Fairfax, Virginia 22030 Purcellville, Virginia 20134
703-359-9700 Fax 703-359-8960

C|C|S Construction Cost Systems, Inc.
11180 Main Street Suite 202
Fairfax, Virginia 22030
703-591-2662 Fax 703-591-2663

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE

RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE

ELECTRICAL SPECS. 2 OF 2

SCALE	NONE
DRAWN	JPR
CHECKED	JPR
APPROVED	
DATE	08/26/95, 1995

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.

E42

PLUMBING SPECIFICATIONS - UNION STATION, ALEXANDRIA, VA.

DEMOLITION NOTES:

1. THE PLUMBING CONTRACTOR SHALL DISCONNECT AND REMOVE ALL WATER CLOSETS, LAVATORIES AND SINKS, INDICATED TO BE DEMOLISHED. THE PLUMBING CONTRACTOR SHALL VERIFY WITH OWNER ON WHETHER TO DISPOSE OF THESE PLUMBING FIXTURES OR TURN THEM OVER TO THE OWNER.

2. THE PLUMBING CONTRACTOR SHALL DISCONNECT AND REMOVE ALL DOMESTIC HOT AND COLD WATER PIPING AND SANITARY WASTE AND VENT PIPING SERVING EXISTING PLUMBING FIXTURES AND EQUIPMENT INDICATED TO BE DEMOLISHED. THE PIPING SHALL BE REMOVED BACK TO BRANCH MAINS OR MAINS WHERE IT SHALL BE VALVED OR CAPPED. WALLS, FLOORS AND CEILING SHALL BE PATCHED TO MATCH EXISTING FINISHES.

3. REFER TO ARCHITECTURAL DEMOLITION PACKAGE FOR DISPOSITION OF ALL FIXTURES AND CASEWORK EQUIPMENT.

4. SCHEDULE ALL SHUTDOWNS THAT AFFECT UTILITIES AND PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION WITH THE OWNER.

5. DEMOLITION WORK AT ALL TIMES SHALL BE SUBJECT TO THE DIRECTION AND APPROVAL OF THE OWNER AND CARRIED OUT IN SUCH A MANNER SO AS NOT TO INTERFERE WITH THE NORMAL OPERATION OF THE STATION.

6. DISPOSE OF ALL REMOVED MATERIALS IN AN APPROVED MANNER.

7. ISOLATE, DRAIN AND REFILL EXISTING SYSTEMS AS REQUIRED TO ACCOMODATE INSTALLATION OF EXISTING AND NEW SYSTEMS.

8. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.

GENERAL NOTES:

1) All dimensions, pipe sizes, pipe capacities, and existing conditions shall be checked and verified by the Contractor at the site before proceeding with any work. Notify architect, owner, or engineer of any discrepancy between drawings and actual field conditions.

2) Coordinate plumbing work with the general, heating/cooling and electrical contractors for clearances, access, structural interferences prior to installation of any systems. Items indicated with an asterisk (*) will be furnished by the owner. Rough-in and final connection utilities shall be by the plumbing contractor.

3) All vent piping to be sloped back to the fixtures they serve.

4) All drainage piping shall have minimum slope of 1/4" per foot for 3" and smaller piping and 1/8" per foot for 4" and larger piping.

5) All vent piping, unless otherwise shown shall be run above finished ceilings and combine all vent piping to a single roof penetration and exit east slope roof. All sanitary and waste piping shall run below finished floor, unless indicated to run in wall chases, and connect into existing piping.

6) Make new cold water and hot water connections into existing water piping as shown on the drawings. Piping to be run concealed wherever possible.

7) Locate access panels in non accessible ceilings and walls for all valves, shock absorbers, cleanouts and all other items that require access to properly maintain or service the building.

8) The plumbing contractors work shall conform to all local PLUMBING CODE REQUIREMENTS.

NOTES:

1.- ALL FIXTURES ARE OF WATER SAVER TYPE.

2.- INDIVIDUAL VENT SHALL BE PROVIDED AT ALL FIXTURES, EXCEPT AS OTHERWISE PROVIDED IN CODE FOR WET, CIRCUIT AND STACK VENTING. THE LOCAL INSPECTOR RESPONSIBLE FOR CODE INTERPETATION AND ENFORCEMENT.

3.- WHERE SHOWN, WATER CLOSET AND LAVATORIES TO BE SET AT HANDICAPPED HEIGHT.

4.- LAVATORY P-TRAP AND ANGLE VALVE ASSEMBLIES FOR HANDICAPP LAVATORIES SHALL BE INSULATED WITH FULLY MOLDED, TRUEBRO, HANDI LAV-GUARD INSULATION KIT MODEL # 102

June 26, 1995 2:12:28 p.m.
Drawing: P:\PROJECTS\6096_00\P_1.DWG

GENERAL PROVISIONS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS
A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1, apply to all work in this Division sections.
1.02 CONTRACT DRAWINGS
A. Drawings are diagrammatic, indicating the general layout of work included.
1.03 INTENT
A. It is the intent of the drawings and specifications to have furnished and installed a complete plumbing system clean, tested, and ready for operation.
B. Incidental accessories, whether particularly specified or shown, necessary for a complete and operable system conforming to all local codes and applicable state and other agencies having jurisdiction, shall be provided.
1.04 SUBMITTALS
A. Submit manufacturer's data and shop drawings for equipment and material to be provided.
1.05 WARRANTIES
A. All work shall be warranted against defect in workmanship and materials for a period of one (1) year.
1.06 PERMITS AND FEES
A. Obtain, pay for, and deliver permits, certificates, and other items required by authorities having jurisdiction.
1.07 FIELD CONDITIONS
A. Before submitting bids verify existing conditions and their affect on work as scoped.
B. Field verify all measurements and conditions affecting work prior to ordering or doing work.

PART 2 - PRODUCTS
2.01 MATERIALS
A. Material and equipment shall be new, first grade, and appropriate for application and environment.
B. Equipment apparatus of any one system shall be of a single manufacturer. The manufacturer must, on request of Owner, submit evidence of five (5) or more years of manufacturing experience in producing products for which submissions are dated.
2.02 ACCESS
A. Access panels and/or doors shall be located in all non-accessible ceilings and walls for all valves, control devices, clean-outs and other items requiring maintenance or service.

PART 3 - EXECUTION

3.01 WORKMANSHIP
A. Work shall be completed in a first class manner by skilled workers of the particular trade.
B. Installation shall conform with requirement of all authorities having jurisdiction.
3.02 CUTTING AND PATCHING
A. Openings in new construction shall be by trade contractor.
B. Cutting and PATCHING in existing construction shall be by trade contractor. Patching shall match adjacent surfaces and material.
C. All openings shall be coordinated with other trades and Owner's staff.
D. Holes in fire rated assemblies shall be caulked with UL approved sealant for rating of assembly.
3.03 CONTINUITY OF SERVICE
A. The work under the contract shall be coordinated with the Owner to minimize interrupting building operations.
water piping

WATER PIPING SYSTEM

PART 1 GENERAL

1.01 DESCRIPTION OF WORK
A. Provide water piping system as herein specified.

PART 2 PRODUCTS

2.01 PIPING MATERIAL
A. Water, below grade and slabs shall be "K" water pipe.
B. Interior Water Services shall be Type "L or K" copper pipe joined with leadfree solder (95-5) and fluxes equal to or less than 0.2 percent lead (ASTM B32).
C. Exposed piping under and adjacent to fixtures shall be chrome plated brass pipe.
2.02 GATE VALVES
A. Gate valves are to be as manufactured by STOCKHAM, NIBCO, or Jenkins.

PART 3 EXECUTION

3.01 MINIMUM COVER FOR EXTERIOR LINES
A. Water Lines: 3'-6".
3.02 INSULATION
A. See "INSULATION" Section.
3.03 DISINFECTION OF POTABLE WATER SYSTEM
A. After the piping system has been tested and before the system is put into operation, the entire water system shall be adequately flushed with potable water to remove foreign materials. The entire water system shall be filled with a solution containing not less than 50 parts per million of available chlorine and allowed to stand 6 hours before flushing. During this period, a pressure of not less than 50 psi shall be maintained on the system and valves shall be fully opened and closed at least 10 times. Following the allowed standing time the system shall again be flushed with potable water until no chlorine remains in the water coming from the system.

INSULATION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK
A. Provide insulation for all systems as herein specified.

PART 2 PRODUCTS

2.01 PIPE INSULATION
a. Piping throughout the work, except natural gas piping, shall be insulated with high density fiberglass pipe insulation in thickness indicated except that insulation thickness for outside piping shall be doubled.
B. Vapor barrier jackets shall have self-sealing lap joint, and joints between sections shall be covered with a 4 inch wide strip of self-sealing vapor barrier material.
C. Aluminum bands shall be applied, two to a section on indoor insulation.

2.02 INSULATION THICKNESS
A. Minimum pipe insulation thickness shall be in accordance with the BOCA Basic Energy Code, local requirements.

SANITARY AND STORM DRAINAGE SYSTEMS

PART 1 - GENERAL
1.01 DESCRIPTION OF WORK
A. Provide sanitary,storm and drainage systems,as herein specified.

PART 2 PRODUCTS
2.01 NO-HUB SOIL PIPE AND FITTINGS (INTERIOR-ABOVE SLABS)
A. Interior sanitary, vent and rainwater piping above floor slabs 2-1/2 inches and larger shall be of spun cast iron, service weight, coated, no-hub pipe and fittings conforming to the standard 301-65T issued by the Cast Iron Pipe Institute.
B. Cast iron pipe shall be straight cylindrical, of uniform thickness, free from cracks and holes and shall have the manufacturer's identification and weight marked on each piece. Pipe shall be "Spun" cast iron type.
C. Joints shall be made with a sealing gasket fabricated from a high quality vulcanized elastomeric compound containing Neoprene. A special stainless steel sleeve with bands shall be installed around the neoprene gasket and tightened by alternately turning the screws to 60 inch/pound torque.

2.02 BELL AND SPIGOT (BELOW SLABS)

A. Interior sanitary, vent and rainwater piping below floor slabs 2-1/2 inches and larger shall be of spun cast iron, service weight, coated, bell and spigot pipe and fittings conforming to the ASTM A-74.
B. Cast iron pipe shall be straight cylindrical, of uniform thickness, free from cracks and holes and shall have the manufacturer's identification and weight marked on each piece. Pipe shall be "Spun" cast iron type.
C. Joints shall be made with a push on type, neoprene conforming to ASTM C-564 gasket shall be compressed when pipe is fully inserted.

2.03 STEEL PIPE, CAST IRON DRAINAGE & MALLEABLE IRON FITTINGS, AND COPPER PIPE (INTERIOR-ABOVE SLABS)
A. Interior sanitary and vent piping 2-1/2 inches and smaller and interior rainwater conductors shall be Schedule 40 galvanized steel pipe with galvanized cast iron drainage fittings or galvanized malleable iron fittings. "DWV" copper drainage pipe may be used with wrought copper drainage fittings.
B. Type "K" copper pipe shall be used for urinal wastes. Copper or galvanized piping shall be used where space conditions preclude use of cast iron. Fittings shall be banded galvanized cast iron drainage type, screwed pattern conforming to ASA 125 pound class or be banded galvanized malleable iron screwed pattern conforming to ASA 150 pound class. They shall be 45 degree or long turn pattern fittings.

2.04 WATERPROOFING
A. Provide grouting around floor mounted plumbing fixtures and pipe sleeves in a neat and workmanlike manner so as to prevent water seepage into rooms below.

PART 3 EXECUTION

3.01 PIPE INSTALLATION AND FABRICATION
A. Sanitary and storm drainage systems shall be run as shown on the drawings or as required to connect to all fixtures, equipment.
The drawings are generally indicative of the work to be installed and it is not possible to indicate offsets, fittings and specialties which may be required. The Plumbing Trade Contractor shall review the structural drawings, room finish conditions, and arrange his work accordingly; furnishing offsets, fittings, and specialties as may be required to meet such conditions.
B. Piping shall be installed to provide access to valves, traps, and equipment furnished under this contract and those furnished under other contracts. Piping shall be installed concealed unless otherwise indicated. Where piping is noted to be installed exposed, it shall be run so as to provide headroom consistent with proper pitch. No piping shall cross below the head of a window or door.
C. Piping, fittings and other parts of systems shall be installed to provide a clearance of not less than 2 inches between the insulating covering and adjacent work whether installed under this or other contracts.
D. Pipe shall be cut accurately to measurements established in the building(s) and shall be worked into place without springing or forcing.
E. Bell and spigot pipe shall be laid with bells facing upgrade. It shall be carefully graded and aligned so that pipe shall be uniformly supported on its entire length at the proper grade and elevation. Adjacent length of pipe shall be placed so that there is a uniform space around the entire bell without blocking or wedging.
F. Screwed pipe shall be reamed and be free from fins and burrs. Threads on piping shall be full cut and not more than three threads on the pipe shall remain exposed once the joint has been completed. Fittings shall be free from fins and burrs. Screwed joints shall be made with lubricant applied to the male threads only. Unions shall be provided where required. Nipples shall be of the same material and weight as the pipe on which they are used. Close nipples shall not be used.

PLUMBING FIXTURES, SPECIAL EQUIPMENT AND EQUIPMENT CONNECTIONS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK
A. Provide insulation for all ADA COMPLIANT LAVATORIES as herein specified or noted.
B. Provide plumbing fixtures for locations indicated on the drawings as scheduled on the drawings. Connect to fixtures and equipment installed under other contracts as indicated.

1.02 SUBMITTALS
A. Submit manufacturer's data and shop drawings for equipment and materials to be provided.

PART 2 PRODUCTS

2.01 GENERAL
A. VITREOUS CHINA WARE
1. Vitreous china ware shall be full fired vitreous china of Class "A" quality. It shall be nonabsorbent and thoroughly burned so that the whole mass is thoroughly fused and vitrified, producing a material of very fine texture, white in color, which when fractured shall show a close grained homogeneous mass, free from pores. China, unless otherwise specified, shall be absolutely white. Fixtures with muddy or discolored appearance shall not be accepted.
B. ENAMELED IRON WARE
1. Enameled iron fixtures shall be made of one piece, close grained cast iron free from pores, holes, blisters, flaws or cracks. Iron in fixtures shall not be less than 1/4 inch thick at a point. Inlet and outlet connections shall be substantially increased in thickness to form the proper shape and amount of material to make a good connection without danger of breakage or cracking the fixtures.

2.02 TRIMMINGS (PLUMBING FIXTURES & EQUIPMENT)
1. Exposed piping connections under and to fixtures or equipment, including valves, fittings, metal trimmings, traps, escutcheons in connection with the fixtures or equipment, shall be made of brass. They shall be chrome plated unless they are totally enclosed in cabinets and not visible when cabinets are closed.
2. Valves, fittings, metal trimmings, traps, escutcheons shall be of heavy castings. Trimmings and fittings shall in cases be adapted to the fixtures with which they shall be used, so they shall fit without straining or leaving gaping openings.
3. Lavatory faucets, fixture stops, faucets for sinks, shall be of such a design that the working threads, the seats and discs shall be easily renewable without taking the body of apparatus from the fixture or line.
4. Trimmings shall represent the manufacturer's first grade line. Competitive or reserve grade trimmings shall not be accepted and if installed shall be removed by the Plumbing Trade Contractor and replaced with proper trimmings without additional cost to the Owners. Manufacturer's name shall be stamped or cast on the trim and fittings so that it cannot be removed without damaging or defacing the article.
5. Fixtures shall be as scheduled on the drawings.
Fixtures are based generally upon American Standard for description purposes. Subject to substitution fixtures and accessories manufactured by Crane, Kohler or Eljer will be accepted.

2.03 CLEANOUTS
A. Cleanouts are to be installed on horizontal or vertical lines and shall be locate din a readily accessible location and brought flush with finished floor or wall. The cleanouts shall be bronze plug type and shall be tightened into the fittings after coating the threads, both male and female, with graphite and oil. Under no condition shall pipe dope, white lead or a hardening composition be use don the threads. Cleanouts shall be the size of the main on which they are installed unless otherwise noted. Cleanouts shall be installed at the base of sanitary and storm water risers.
B. Cleanouts to finished grade or paving, J.R. Smith No. 4445 cleanout. Provide a concrete pad around the cleanout.
C. Cleanouts in ceramic tile, asphalt tile, terrazzo and concrete floors, J.R. Smith No. 4313-ST, brass "T" handle screwed bronze plug, nickel bronze rim and scoriated nickel bronze cover secured with screws.
D. Cleanouts above floor: J.R. Smith No. 4517 cast iron cleanout "T" with bronze raised head. Install cleanouts approximately 12 inches from finished floor.
E. Cleanouts to finish wall: J.R. Smith No. 4517 with 4730/4735 cast iron cleanout with brass screwed plug, nickel bronze square access cover and with anchor lugs and cover plates secured with screws. Install cleanouts approximately 12 inches above finished floor.
F. Cleanouts to finish floor: Concrete slab on grade J.R. Smith No. 4240 cast iron top.
Housing shall be adjustable to finished floor level.
6. Cleanouts in carpeted floors: J.R. Smith No. 4028-Y cast iron body and frame, nickel bronze top, threaded bronze plug, carpet marker.
H. A flashing clamp device shall be provided on cleanouts to be installed in above ground floor levels, and if crawl spaces are located below. Provide a-3½-inches x 36 inches 4 lb. lead sheet on each cleanout and anchor with flashing clamp device.

2.04 BACKFLOW PREVENTERS
A. Provide on systems that are connected to the potable water supply, a backflow preventer. "Watts" No. 900-N6 Series shall be installed on toxic degree of hazards and No. 9D, 28DA Series, etc. on non-toxic degree of hazards. A "Watts" No. TK-4 testing kit shall be provided with the No. 900 Series. Watts 709 double check valves will be as indicated on the contract drawings.
B. Provide a "Watts" Series A6 air gap fitting, on 900 Series. Drain lines from the backflow preventers shall be piped to the nearest floor drain or janitor's closet fixture.

2.05 SHOCK ABSORBERS
A. Provide as shown on the drawings a shock absorber as manufactured by J.R. Smith No. 5000, unless noted otherwise. The units shall be sized as required for the particular location and according to the manufacturer's recommendations.
B. Shock absorbers may also be manufactured by Zurn or Wade.

PLUMBING SPECIALTIES

PART 1 GENERAL

1.01 RELATED DOCUMENTS
A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this Section.

1.02 MATERIALS AND EQUIPMENT
A. Material and equipment used for this work shall be unused and of the latest model or design available.
B. Equipment shall be installed in strict accordance with manufacturer's recommendations and details and instructions.
C. Materials not specifically described but indicated or incidentally required for a complete system shall be provided and shall be submitted to the Architect for review.
D. Materials shall be delivered, stored and handled so as to preclude damage by weather, dirt or abrasion.

1.03 SUBMITTALS
A. Submit manufacturer's data and shop drawings equipment and materials specified. Description of each item shall include dimensions, installation, installation information, specified ratings and applicable code compliance.

PART 2 PRODUCTS

2.01 PRESSURE RATINGS
A. Equipment and materials shall have a working pressure as determined by A.S.M.E.(or similar body), of not less than 125 psi.

2.02 SLEEVES
A. Sleeves shall be provided for new piping passing through new building construction. Sleeves shall finish flush with each construction surface. Steel pipe sleeves shall have machined ends.
B. Sleeves in new poured concrete floors shall be minimum 12 gage galvanized sheet steel, except as noted.
C. Sleeves in new poured concrete bearing walls, built-up masonry walls, beams and columns shall be Schedule 40 black steel pipe.
D. Sleeves in floors containing floor drains shall be Schedule 40 black steel pipe extending 2 inches below and 6 inches above the finished floor.
E. Sleeves passing through waterproof construction shall be Schedule 40 black steel pipe, designed so that waterproofing and flashing can be attached to the sleeve.
F. Sleeves shall be 1 inch larger than the pipe, or pipe covering. Insulation shall pass through sleeves. Allow approximately 1/2 inch annular space between pipe plus insulation or the bare pipe.
G. For piping passing through sleeves in areas containing floor drains, and in waterproof construction, seal annular space between pipe or pipe insulation and the enclosing sleeve with oakum and finish with high melting point resilient sealing compound.
H. For piping passing through fire rated walls, floors, and ceilings, seal annular space between pipe or pipe insulation and the enclosing sleeve (wall) with Dow 3-6548 Silicone RTV or equal fire resistant foam sealant, or pack with oakum or fibrous glass blanket and finish filling each with 1 inch thickness of the following sealing compounds:
1. Polysulfide sealant (Thiokol).
2. Dow-Corning No. 780 silicone building sealant.
3. Elastomeric butyl rubber caulking compound.

VITETTA GROUP
□ ARCHITECTURE □ ENGINEERING □ PLANNING □ INTERIOR DESIGN
The Wallace Building, 642 N. Broad Street, Philadelphia, PA 19130, (215)235-3530, FAX (215)235-3530
1600 Duke Street, Suite 400, Alexandria, VA 22314, (703)683-1555, FAX (703)683-1552
3711 Bronrock Suite 300, Houston, TX 77042, (713)789-1400, FAX (713)789-3052
45 Hoddonfield Road, Suite 306, Cherry Hill, NJ 08002, (609)321-2000, FAX (609)321-2009

PHR&A
Peters Harris Rust & Associates, pc
Engineers, Surveyors, Planners
Alexandria, Virginia
3968 Pender Drive, PO Box 961
Fairfax, VA 22030-0961
703-273-6700 Fax 703-385-3985

Construction Cost Systems, Inc.
CCS
11185 Main Street
Suite 105
Fairfax, Virginia 22030
703-591-2662 Fax 703-691-2460

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

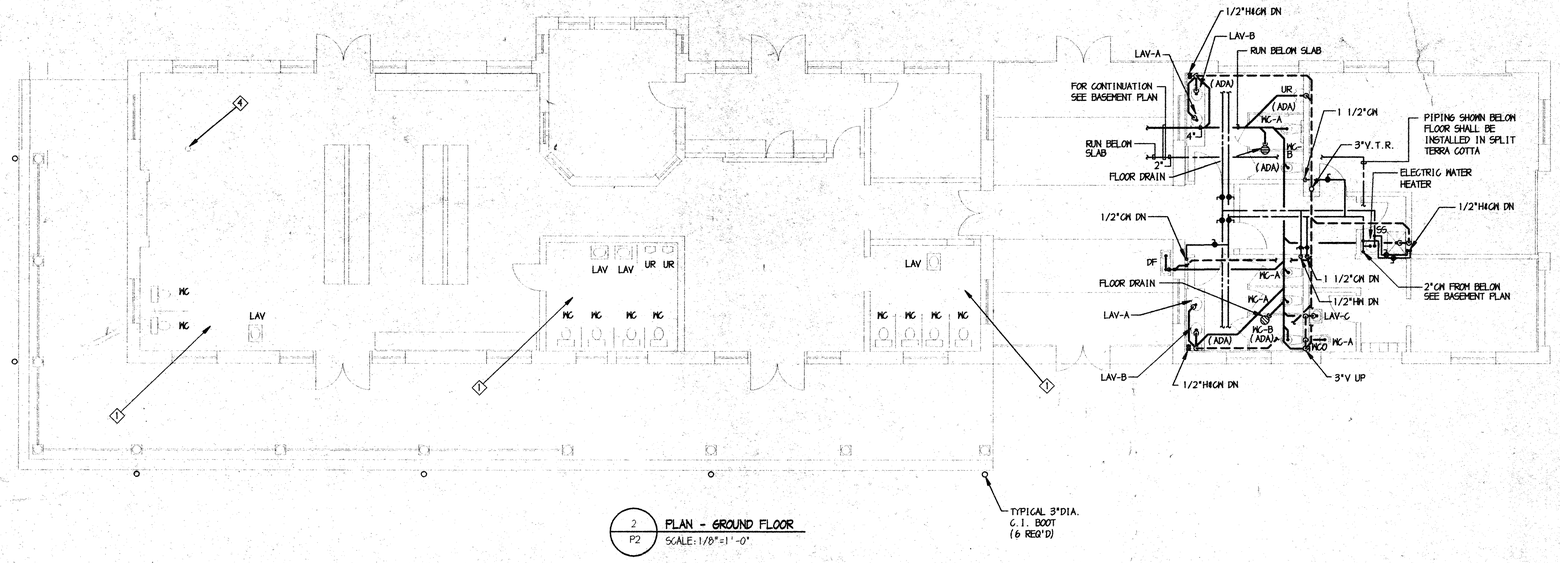
DRAWING TITLE
PLUMBING COVER SHEET

SCALE	NO SCALE
DRAWN	G.P.
CHECKED	L.L.F.
APPROVED	J.J.D.
DATE	6/26/95

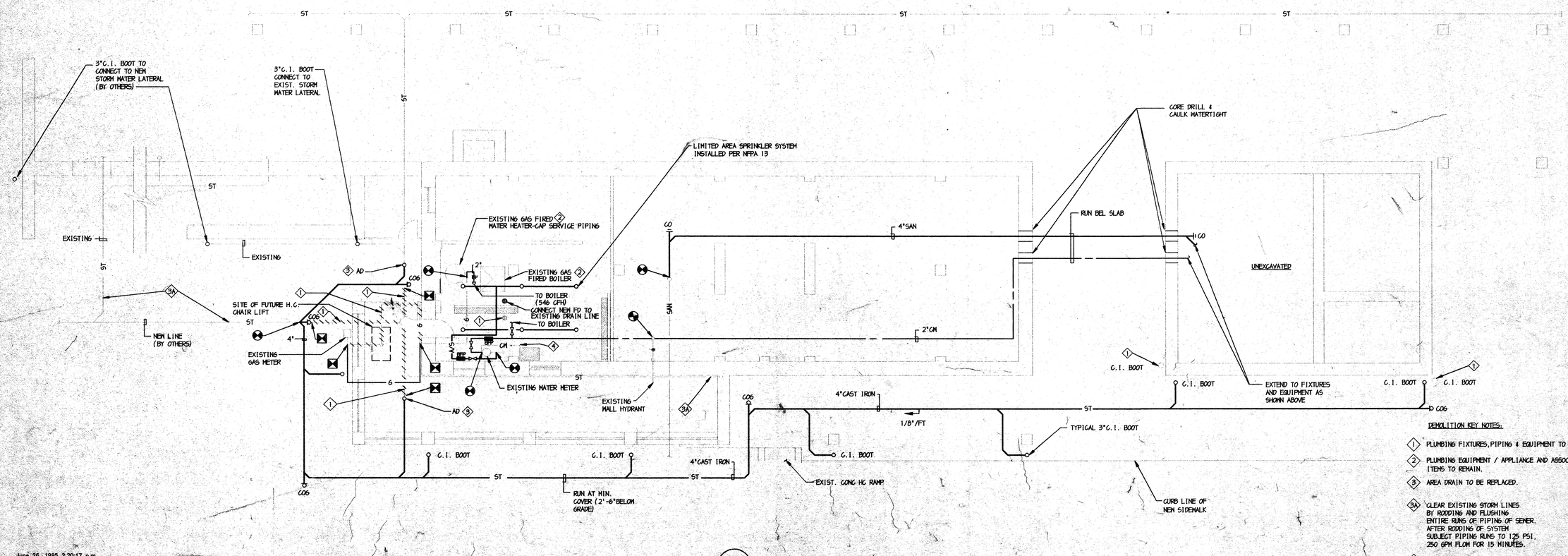
REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
P1



2 / P2 PLAN - GROUND FLOOR
SCALE: 1/8"=1'-0"



1 / P2 PLAN - BASEMENT
SCALE: 1/8"=1'-0"

DEMOLITION KEY NOTES:

1. PLUMBING FIXTURES, PIPING & EQUIPMENT TO BE REMOVED.
2. PLUMBING EQUIPMENT / APPLIANCE AND ASSOCIATED ITEMS TO REMAIN.
3. AREA DRAIN TO BE REPLACED.
3A. CLEAR EXISTING STORM LINES BY RODDING AND FLUSHING ENTIRE RUNS OF PIPING OF SEWER. AFTER RODDING OF SYSTEM SUBJECT PIPING RUNS TO 125 PSI, 250 GPM FLOW FOR 15 MINUTES.
4. DOMESTIC COLD WATER LINE TO BE REMOVED.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Wallace Building 444 N. Third Street Philadelphia, PA 19130 (215)235-3500 FAX(215)235-3530
☐ 35 Haddonfield Road Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 3711 Bforpark Blvd. Suite 1004 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-6812

PHR&A
Patton Harris Rust & Associates, pc Engineers Surveyors Landscape Architects 10605 Judicial Drive Fairfax, Virginia 22030 703-273-2700 Fax 703-385-3883

CCS Construction Cost Systems, Inc.
11166 Main Street Suite 205 Fairfax, Virginia 22030 703-691-2082 Fax 703-691-2460

PROJECT. NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.

DO NOT SCALE DRAWINGS.

© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
PLUMBING BASEMENT AND GRD FLR

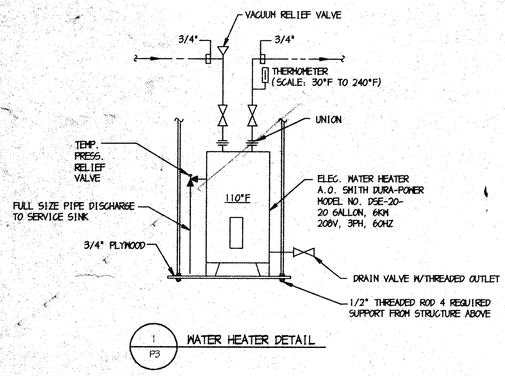
SCALE	1/8"=1'-0"
DRAWN	G.P.
CHECKED	L.L.F.
APPROVED	J.J.D.
DATE	6/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
P2

June 26, 1995 2:20:17 p.m.
Drawing: P:\PROJECTS\6096_00\P_2R.DWG



1/P3 WATER HEATER DETAIL

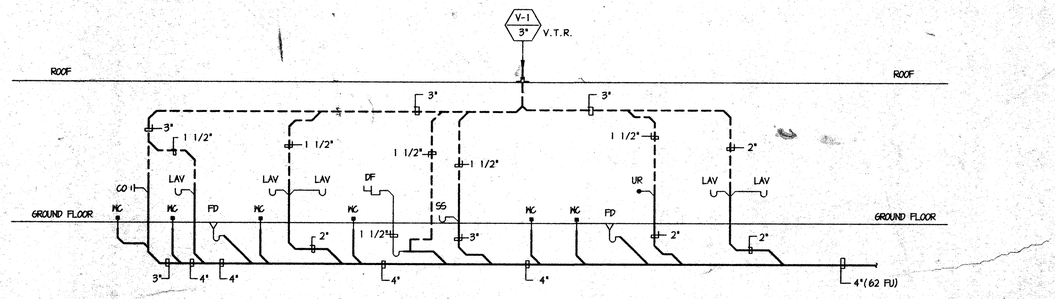
PLUMBING SYMBOLS AND ABBREVIATIONS

- SANITARY SEWER
- SANITARY VENT PIPING
- DOMESTIC COLD WATER (CW)
- DOMESTIC HOT WATER (HW)
- GATE VALVE OR BALL VALVE
- SA — SHOCK ABSORBER
- FD — FLOOR DRAIN
- POINT OF CONNECTION BETWEEN NEW & EXISTING
- TERMINATION POINT OF DEMOLITION
- * — INDICATES EQUIPMENT FURNISH BY OWNER. ROUGH-IN AND FINAL CONNECTION(S) BY PLUMBING CONTRACTOR.
- INDICATES SECTION NUMBER / DETAIL
- INDICATES DRAWING ON WHICH SECTION / DETAIL APPEARS
- (DRAWING WHERE ORIGINATING)
- A/S — AUTOMATIC SPRINKLER PIPIE
- UPRIGHT SPRINKLER HEAD
- CO — CLEANOUT
- COG — CLEANOUT TO GRADE
- FCO — FLOOR CLEANOUT
- WCO — WALL CLEANOUT
- AD — AREA DRAIN

V	VENT
ABV	ABOVE
CLG	CEILING
BLW	BELOW
S	SOIL
W	WASTE
C.W.	COLD WATER
H.W.	HOT WATER
FD	FLOOR DRAIN
(E)	EXISTING
G	GAS
AD	AREA DRAIN

NOTES:
1. SHOCK ABSORBER DESIGNATIONS CONFORM TO P.D.I SIZING STANDARD.
2. FOR VALVING SEE PLAN AND DETAILS.

2/P3 WATER RISER DIAGRAM



3/P3 SANITARY RISER DIAGRAM

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	MIN. DRAIN	MIN. VENT (INDIV.)	CW	HW	ROUGHING-IN SIZES (INCHES) BASIS OF DESIGN (MFR. MODEL NUMBERS)
WC-A	WATER CLOSET (PUBLIC TOILET ROOMS)	4"	2"	1"	-	2234.015 MADERA TOILET, VITREOUS CHINA; 1.5 GAL. FLUSH, FLOOR MTD, TOP SPUD, ELONGATED BOWL, SIPHON JET. SLOAN # 111, LOW CONSUMPTION. SEAT-OLSONITE #45 (WHITE)
WC-B	WATER CLOSET (HANDICAPPED)	4"	2"	1"	-	3049.102 NEW GADET TOILET, VITREOUS CHINA; 1.5 GAL. FLUSH, FLOOR MTD, TOP SPUD, ELONGATED BOWL, SIPHON JET. SLOAN # 111 F.V. LOW CONSUMPTION. SEAT-OLSONITE #45 (WHITE)
LAV-A	LAVATORY (COUNTER)	1 1/2"	1 1/4"	1/2"	1/2"	3302.015 OVAL HORIZON C.T. ENAMELED CAST IRON, COUNTER LAVATORY 20 INCHES X 17 INCHES W/8 INCHES CENTERS. FAUCET SHALL BE SPEAKMAN SC-~~3044-DTB-BOCA/FLO~~-3041, C.P. PLATE ON 8 INCH CENTER , 1 1/4" "P" TRAPS
LAV-B	LAVATORY (HANDICAPPED) (COUNTER)	1 1/2"	1 1/4"	1/2"	1/2"	3302.015 OVAL HORIZON C.T. ENAMELED CAST IRON, COUNTER LAVATORY 20 INCHES X 17 INCHES W/8 INCHES CENTERS. FAUCET SHALL BE SPEAKMAN SC-3044-BOCA/FLO, C.P. PLATE ON 8 INCH CENTER , 1 1/4" "P" TRAPS. INSULATE SUPPLY AND WASTE CONNECTION W/"HANDI-LAV" KIT
LAV-C	LAVATORY (SLAB)	1 1/2"	1 1/4"	1/2"	1/2"	4067.016 REGALYN, 8" CENTERS, ENAMELED CAST IRON, FAUCET SHALL BE SPEAKMAN SC-~~DTB-BOCA/FLO~~-3041.
DF	DRINKING FOUNTAIN	1 1/2"	1 1/2"	1/2"	-	HAWS MODEL 3300 BARRIER FREE DUAL PEDESTAL FOUNTAIN (HI-LOW) W/LEAD FILTER
FD	FLOOR DRAIN	3"	1 1/4"	-	-	J.R. SMITH #~~3005~~-2805-A G.I. BODY WITH FINISH AS SELECTED BY ARCHITECT
UR	URINAL	2"	1 1/4"	3/4"	-	6501-010 HIGHBROOK VIT. CHINA WASH-OUT WATER SAVER (1.5GAL FLUSH) URINAL WITH 3/4" INLET TOP SPUD, 2" FEMALE OUTLET THREADED, WALL HANGERS, SLOAN #186 F.V. CARRIER J.R. SMITH F16. 634
SS	SERVICE SINK	1 1/2"	1 1/2"	1/2"	1/2"	AMERICAN STANDARD, AKRON #7645.018, P-TRAP #7748.176, FAUCET #8340.242
AD	AREA DRAIN	4"	-	-	-	J.R. SMITH #2230, CAST IRON BODY AND GRATE WITH SLOTTED SEDIMENT BUCKET

NOTE: ADA DESIGNATED FIXTURES SHALL BE INSTALLED IN COMPLIANCE TO ADA REQUIREMENTS.

VITETTA GROUP
ARCHITECTURE ☐ ENGINEERING ☐ PLANNING ☐ INTERIOR DESIGN
☐ The Woolace Building 42 N. Broad Street Doylestown, PA 18901 (215)345-3500 FAX (215)345-3530
☐ 53 Haddonfield Road Suite 300 Cherry Hill, NJ 08002 (609)321-2000 FAX (609)321-2009
☐ 3711 Briarpark Suite 300 Houston, TX 77042 (713)789-9141 FAX (713)789-3052
☐ 1600 Duke Street Suite 400 Alexandria, VA 22314 (703)683-1600 FAX (703)683-1618

PHR&A
Patton Harris Rust & Associates, pc
Historic Preservation
Landscape Architecture
Site Planning
Urban Design
200 S. Peyton St. Suite 300 Alexandria, VA 22314
703-549-7700 FAX 703-549-3334

Construction | Cost | Systems, Inc.
CCS
11166 Main Street Suite 300 Fairfax, Virginia 22030 703-691-2062 FAX 703-691-2449

PROJECT NO. 6096.00

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND THE ARCHITECT NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION.
DO NOT SCALE DRAWINGS.
© 1995 VITETTA GROUP

PROJECT TITLE
RESTORATION AND REHABILITATION OF ALEXANDRIA UNION STATION FOR THE CITY OF ALEXANDRIA, VIRGINIA

DRAWING TITLE
PLUMBING DETAIL, SCHEDULE AND RISERS

SCALE	NO SCALE
DRAWN	G.P.
CHECKED	L.L.F.
APPROVED	J.J.D.
DATE	6/26/95

REVISIONS

SYM.	DATE	DESCRIPTION

DRAWING NO.
P3

June 28, 1995 2:22:32 p.m.
Drawing: P:\PROJECTS\6096_00\P_3.DWG

ATTACHMENT L.5

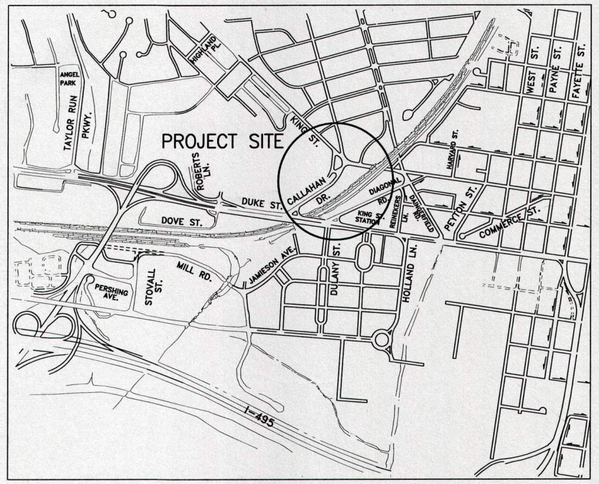
Record Drawings

Undated
Pedestrian Improvements at Alexandria Union Station

PEDESTRIAN IMPROVEMENTS AT ALEXANDRIA'S UNION STATION

PROJECT NARRATIVE

THIS PLAN PROPOSES PEDESTRIAN IMPROVEMENTS TO THE UNION STATION SITE, INCLUDING THE UPGRADE OF ADJACENT CROSSWALKS AND LIGHTING, NEW LANDSCAPING, IRRIGATION AND SIDEWALKS. THE IMPROVEMENTS ALSO INCLUDE MILLING AND REPAVING THE EXISTING ASPHALT AREA.



LOCATION MAP
1" = 500'

INDEX

1. COVER SHEET
2. CONSTRUCTION NOTES
3.–4. CONSTRUCTION DETAILS
5. BUS SHELTER DETAILS
6.–7. EXISTING CONDITIONS
8. PEDESTRIAN IMPROVEMENTS
9. STRIPING PLAN
10. GRADING PLAN
11.–12. LANDSCAPE PLAN
13.–14. IRRIGATION PLAN
15. SEDIMENT AND EROSION CONTROL PLAN

CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

CITY OF ALEXANDRIA ITB: # 0401

RECOMMENDED FOR APPROVAL DATE:
CHIEF–ENVIROMENTAL QUALITY DIVISION

RECOMMENDED FOR APPROVAL DATE:
CHIEF–ENGINEERING & DESIGN DIVISION

RECOMMENDED FOR APPROVAL DATE:
CHIEF–CONSTRUCTION & INSPECTION DIVISION

RECOMMENDED FOR APPROVAL DATE:
CHIEF–BUREAU OF TRANSPORTATION

RECOMMENDED FOR APPROVAL DATE:
DEPUTY DIRECTOR–BUREAU OF ENGINEERING

RECOMMENDED FOR APPROVAL DATE:
DEPUTY DIRECTOR–BUREAU OF OPERATIO

APPROVED DATE:

REVISIONS
Date: INITALS COMMENTS

DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: ITB No. 0401 Sheet 1 of 15

UNION STATION
COVER SHEET

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

GENERAL NOTES

1. THE PROPERTY DELINEATED ON THIS PLAN IS LOCATED ON CITY OF ALEXANDRIA TAX MAP #073.01, PARCEL A LOT #04.

2. THE SITE IS ZONED UT (UTILITY)

3. OWNER: CITY OF ALEXANDRIA

4. VERTICAL DATUM: U.S.G.S. '29'

5. BENCH MARKS:

   BM#1: NORTHING = 2,127,390.
   EASTING = 3,624,730.
   ELEVATION = 37.02
   DESCRIPTION = D465 1971 BRASS DISC IN CONC. @ SO. END OF HEDGE ROW SO. OF R.R. STATION

   BM#2: NORTHING = 2,127,520.
   EASTING = 3,624,970.
   ELEVATION = 29.50
   DESCRIPTION = D12 RESET 1955 BRASS DISC @ SO. ABT. SEAT @ W. END OF ABT. @ R.R. TRACKS OVER KING STREET @ TRAIN STATION

6. THE SITE IS SERVED BY PUBLIC SEWER AND WATER.

7. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION AND NOTIFY T&ES AT (703) 838-4324 IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND APPROVED PLAN.

8. EXISTING UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN AND AROUND THE PROPOSED WORK AREAS!! EXISTING UNDERGROUND UTILITY INFORMATION IS TAKEN FROM AVAILABLE RECORDS. THE CITY OF ALEXANDRIA MAKES NO GUARANTEE THAT THE UNDERGROUND UTILTIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. IN ADDITION, THE DEPTHS OF EXISTING WATER, TELEPHONE, ELECTRIC, GAS AND CABLE TV UTILITY LINES MAY VARY BENEATH THE SURFACE OF THE GROUND. THE CONTRACTOR IS RESPONSIBLE TO CONTACT "MISS UTILITY" UTILITY SERVICE PROTECTION CENTER AT 1-(800) 257-7777 REGARDING THE LOCATIONS OF THESE UNDERGROUND UTILITIES, AND FOR VERIFYING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES THAT MAY OCCUR DUE TO HIS FAILURE TO LOCATE AND PROTECT THESE UNDERGROUN FACILITIES.

9. EXISTING MANHOLE FRAMES AND COVERS AND VALVE BOXES AND COVERS SHALL BE ADJUSTED OR RECONSTRUCTED, AS NECESSARY, TO MATCH NEW FINISHED GRADES.

10. ALL BASE, SUBBASE, AND SUBGRADE MATERIAL SHALL BE COMPACTED AT OPTIMUM MOISTURE CONTENT, WITHIN A TOLERANCE OF +/- 2% OF OPTIMUM.

11. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO EXISTING ROADS AND UTILITIES THAT OCCUR AS A RESULT OF HIS CONSTRUCTION PROJECT WITHIN OR CONTIGUOUS TO EXISTING CITY OR STATE RIGHT-OF-WAYS.

12. ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA-AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS.

13. CONTACT VIRGINIA-AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES.

14. ALL FILL BENEATH ROADWAYS AND UTILITIES (BOTH PUBLIC AND PRIVATE) SHALL BE PLACED AS CONTROLLED FILL.

15. ALL FINISHED GRADING, SEEDING, SODDING, OR PAVING SHALL BE DONE IN SUCH A MANNER AS TO PRECLUDE THE PONDING OF WATER ON THE SITE, PARTICULARLY ADJACENT TO BUILDING AND STORM INLETS.

16. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.

17. CONTRACTOR SHALL SMOOTHLY TRANSITION NEW CURB AND GUTTER, TO MEET AND MATCH EXISTING CURB AND GUTTER, AROUND CURB RETURNS WHERE POSSIBLE. TRANSITIONS SHALL BE BUILT TO INSURE POSITIVE DRAINAGE.

18. THERE ARE NO SIGNIFICANT GEOLOGICAL FEATURES WITHIN THE

ALL REQUIRED
SUBMITTED TO
FW AND

20. WHEN NEW UTILITIES ARE TO BE INSTALLED WITHIN CONTAMINATED SOILS OR LANDFILL, THE TRENCHES SHALL BE OVER EXCAVATED BY 2' IN ALL DIRECTIONS AND BACKFILLED WITH CLEAN MATERIALS.

21. THE CONTRACTOR SHALL ISSUE WRITTEN PROGRESS UPDATES TO THE DEQ AND THE FIRE MARSHALL'S OFFICE, REGARDING THE IMPLIMENTATION OF THE REMEDIATION PLAN.

22. THE CITY OF ALEXANDRIA DEPARTMENT OF T&ES DIVISION OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OF UNDERGROUND STORAGE TANKS, DRUMS AND CONTAINERS ARE ENCOUNTERED ON THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, AND SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE AND CITY REGULATIONS.

23. RODENT ABATEMENT WILL BE ADDRESSED BY THE CONTRACTOR WHO SHALL INSTITUTE A RODENT ABATEMENT PLAN TO THE SATISFACTION OF CITY OF ALEXANDRIA, CODE ENFORCEMENT.

24. ROOF DRAINAGE SHALL BE PIPED INTO THE RECEIVING STORM DRAINAGE SYSTEM.

25. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE, TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITY TO OCCUR BETWEEN THE FOLLOWING HOURS: MONDAY THROUGH FRIDAY 7AM TO 6PM AND SATURDAY FROM 9AM TO 6PM.

    NO CONSTRUCTION ACTIVITY IS PERMITTED ON SUNDAY. PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS: MONDAY THROUGH FRIDAY FROM 9AM TO 6PM. AND SATURDAY FROM 10AM TO 4PM. ANY DEVIATION FROM THESE WORK HOURS SHALL REQUIRE CITY APPROVAL.

26. CERTIFIED RESPONSIBLE LAND DISTURBER:
    MOHAMAD HALIM
    CITY OF ALEXANDRIA
    301 KING STREET
    ROOM 4130
    ALEXANDRIA, VA 22314

27. THE LOCATION OF ALL EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE NNECESSARY UTILITY COMPANIES FOR LOCATION AND/OR ADJUSTMENT OF THE SAME.

28. ALL CONSTRUCTION DETAILS AND METHODS OF CONSTRUCTION UNDER THESE SPECIFICATIONS WILL CONFORM TO THE APPLICABLE REQUIREMENTS OF DIVISION III, IV, AND V OF THE LATEST VIRGINIA DEPARTMENT OF TRANSPORTATION, ROAD AND BRIDGE SPECIFICATIONS, AND ADDENDA EXCEPT STORM AND SANITARY SEWER CONSTRUCTION WHICH WILL CONFORM TO THE CURRENT CITY OF ALEXANDRIA SPECIFICATIONS.

29. ALL FIRE HYDRANTS ARE THE PROPERTY OF THE CITY OF ALEXANDRIA FIRE DEPARTMENT. ALL TRAFFIC LIGHT CABLES, TRAFFIC SIGNS, TRAFFIC CONTROL BOXES, AND TRAFFIC LIGHT POLES ARE THE PROPERTY OF THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

30. ENVIRONMENTAL SITE ASSESSMENT: THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, CONNECTED NON-TIDAL WETLANDS, FLOOD PLAINS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS OR WETLANDS LOCATED ON THIS SITE, FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL OR GROUNDWATER CONTAMINATION ON THE SITE.

31. 6 CONCERNING UTILITY WORK: NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. ALL EXCAVATED MATERIAL TO BE REPLACED INTO THE TRENCH SHALL BE STOCKPILED ON THE HIGH SIDE OF THE TRENCH. IF ANY TRENCH WORK WILL REMAIN OPEN AFTER THE END OF THE WORKDAY, ALL NEEDED EROSION AND SEDIMENT CONTROLS SHALL BE EMPLOYED. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

FLOOD ZONE

THE UNION STATION SITE IS LOCATED IN FLOOD ZONE "X", AS SHOWN ON THE FLOOD INSTURANCE RATE MAP FOR THE CITY OF ALEXANDRIA, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

ARCHEOLOGICAL NOTE

ARCHEOLOGICAL INVESTIGATIONS RELATED TO THE OVERALL UNION STATION PROJECT WERE PREVIOUSLY COMPLETED TO THE SATISFACTION OF THE CITY OF ALEXANDRIA. NO AREAS OF SIGNIFICANCE ARE KNOWN TO EXIST ON THE UNION STATION SITE. THE CONTRACTOR WILL NOTIFY ALEXANDRIA ARCHAEOLOGY (703- 838-4399) TWO WEEKS PRIOR TO ANY GROUND DISTURBING ACTIVITY (SUCH AS CORING, GRADING, VEGETATION REMOBAL, LANDSCAPING, UNDERGROUNDING UTLITIES, PLACEMENT OF IN-GROUND FIXTURES, AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) ON THIS PROPERTY. CITY ARCHAEOLOGISTS WILL PROVIDE ON-SITE INSOECTIONS TO RECORD SIGNIFICANT FINDS. IF SIGNIFICANT ARCHAEOLOGICAL RESOURCES (INCLUDING OLD FOUNDATION, WELLS, PRIVIES, OR CONCENTRATIONS OF ARTIFACTS) ARE DISCOVERED DURING EXCAVATION OR OTHER CONSTRUCTION ACTIVITIES, CONTACT ALEXANDRIA ARCHAEOLOGY. WORK MUST CEASE IN THE AREA OF DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

EROSION AND SEDIMENT CONTROL

THE CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. AN EROSION AND SEDIMENT CONTROL PLAN IS INCLUDED WITH THESE FINAL PLANS. ALL EROSION/SEDIMENT CONTROL MEASURES WILL CONFORM TO THE CURRENT STANDARDS OF THE CITY OF ALEXANDRIA AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

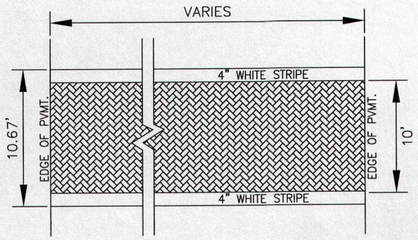
REVISIONS
Date: INITALS COMMENTS

DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: ITB No. 0401 Sheet 2 of 15

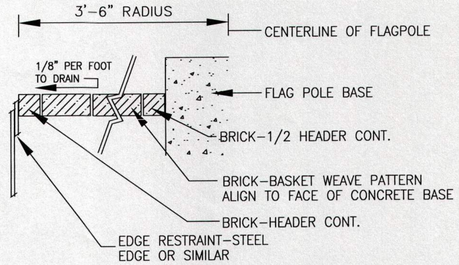
UNION STATION CONSTRUCTION NOTES

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

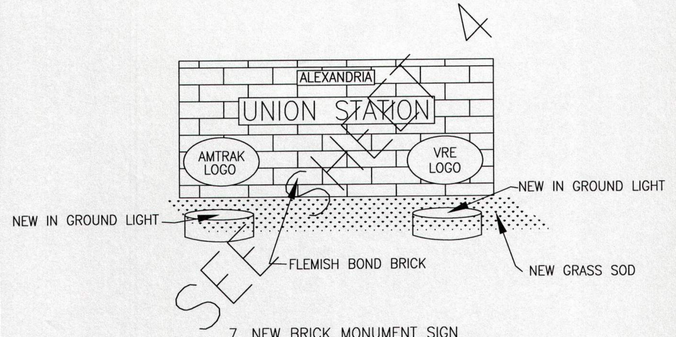


THE CONTRACTOR MUST USE THE PATENTED STREET PRINT PAVEMENT TEXTURING PROCESS.
PATTERN: EUROPEAN HERRINGBONE PATTERN, OR AS APPROVED BY T&ES COLOR: TERRACOTTA RED WIDTH: THE CORSSWALKS SHALL BE 10' WIDE BORDER: EACH SIDE OF THE CROSSWALK SHALL HAVE A 4" WHITE, REFLECTIVE THERMOPLASTIC BORDER. THE IMPRESSED ASPHALT MAY ONLY BE PERFORMED ON NEW ASPHALT. WHERE EXISTING ASPHALT OCCURS, MILL AND REPLACE 2.5" OF THE OLD PAVEMENT. STAMP THE BRICK PATTERN ON THE NEW ASPHALT ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS BEFORE THE ASPHALT COOLS.

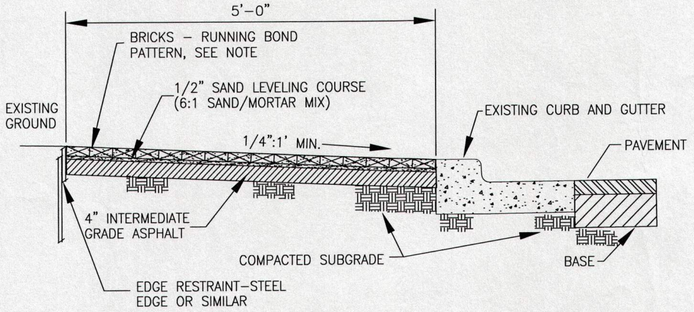
1. ASPHALT PAVER DETAIL ON EX. ASPHALT
NTS



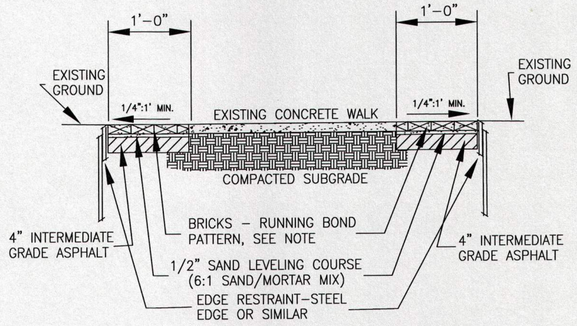
4. BRICK PAVING AT FLAGPOLE
NTS



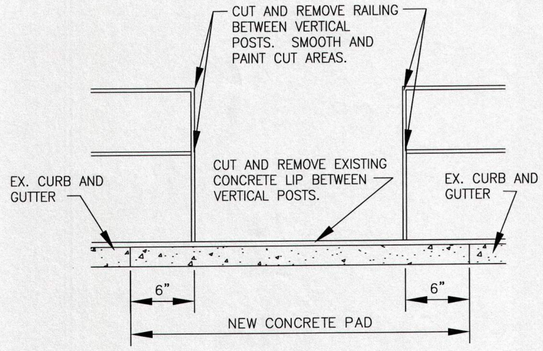
7. NEW BRICK MONUMENT SIGN
NTS



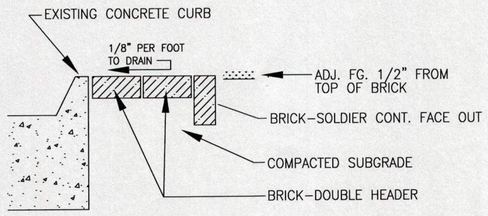
2. TYPICAL SIDEWALK SECTION
NTS



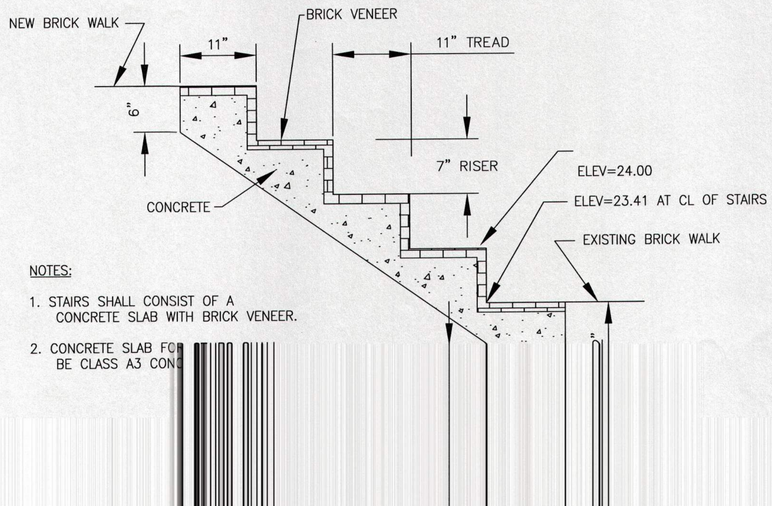
5. BRICK BANDING
NTS



8. BREAK IN RAILING
NTS



POLE



NOTES:

1. STAIRS SHALL CONSIST OF A CONCRETE SLAB WITH BRICK VENEER.
2. CONCRETE SLAB FOR BE CLASS A3 CONC

NOTES

THE FOLLOWING BRICK MAY BE USED FOR CITY MAINTAINED SIDEWALKS:

1. MODULAR STANDARD BALTIMORE BRICK KING WILLIAM RANGE MANUFACTURED BY BALTIMORE BRICK CO., BALTIMORE, MD.
2. OLD VIRGINIA #24 (FULL RANGE) MANUFACTURED BY OLD VIRGINIA BRICK CO., SALEM, VA
3. CALVERT PAVERS MANUFACTURED BY BALTIMORE BRICK CO., BALTIMORE, MD.

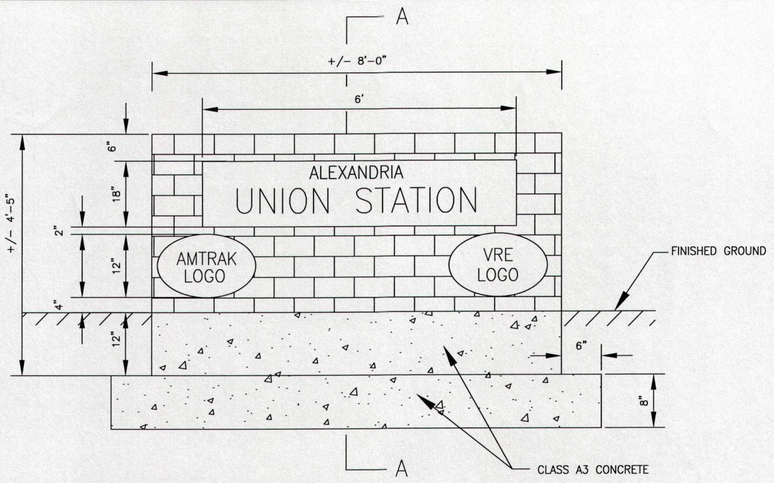
REVISIONS
Date: INITALS COMMENTS

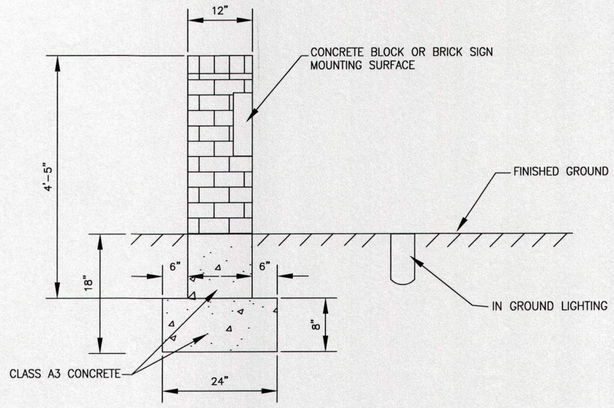
DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: ITB No. 0401 Sheet 3 of 15

UNION STATION
CONSTRUCTION
DETAILS

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

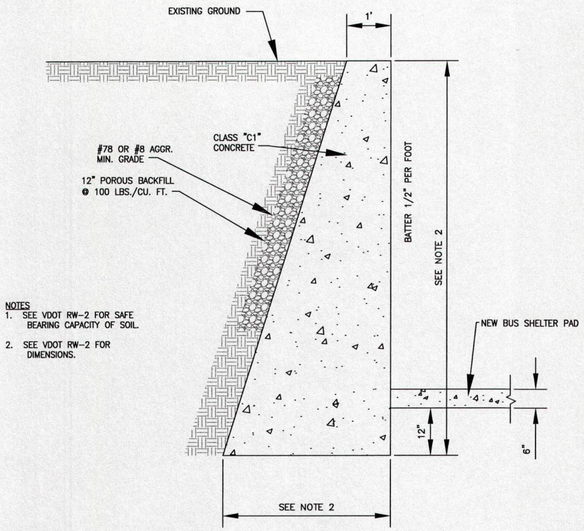




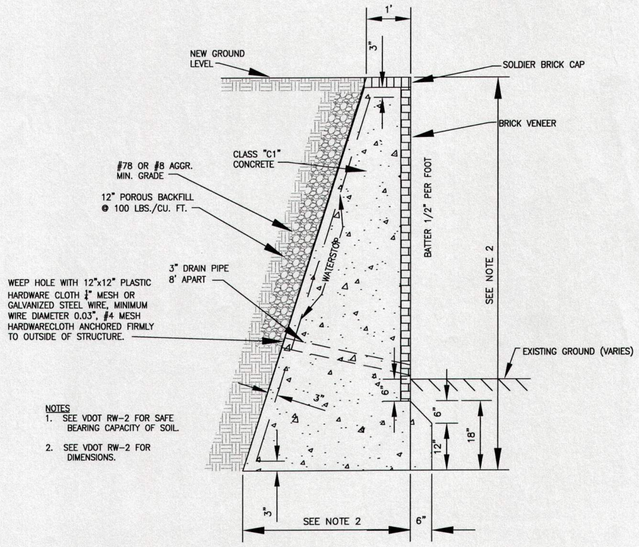
SECTION A–A
NTS

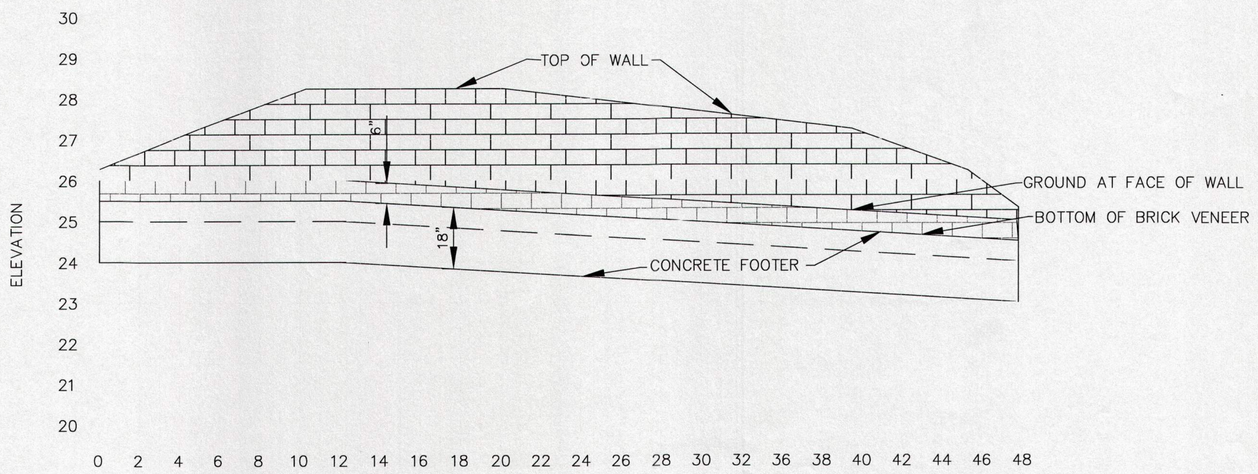
SUBMIT SHOP DRAWING TO CITY FOR APPROVAL

7. NEW BRICK MONUMENT SIGN
NTS



10. CONCRETE GRAVITY RETAINING WALL (VDOT RW-2)
AT BUS SHELTER, NORTH SIDE OF KING STREET
NTS





NING WALL (VDOT RW-2)
OTECTION

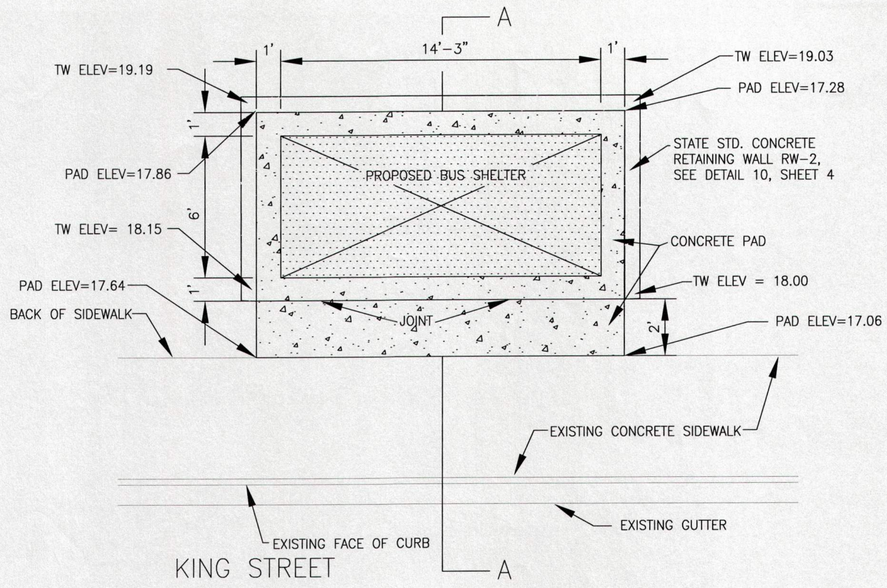
REVISIONS
Date: INITALS COMMENTS

DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: ITB No. 0401 Sheet 4 of 15

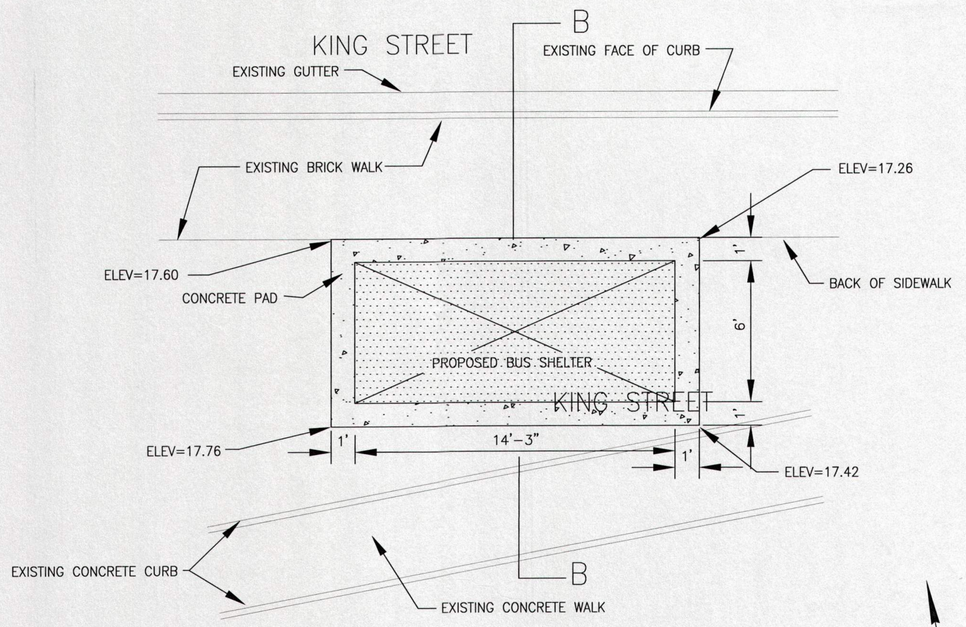
UNION STATION
CONSTRUCTION
DETAILS

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313



BUS SHELTER PAD DETAIL
NORTH SIDE OF KING STREET

NOT TO SCALE



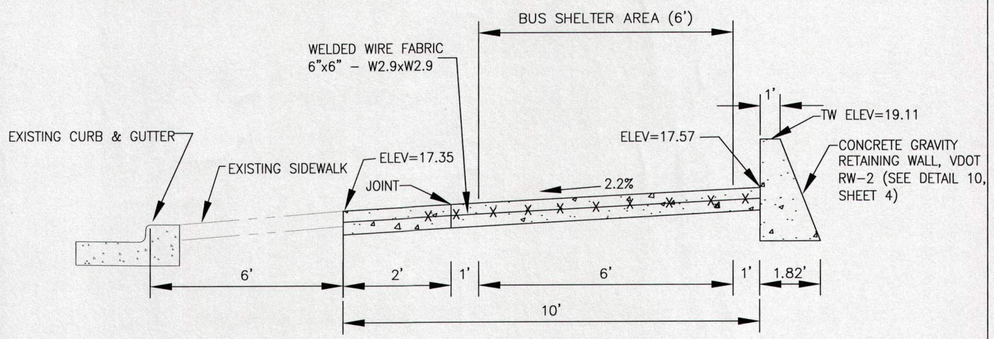
BUS SHELTER PAD DETAIL
SOUTH SIDE OF KING STREET

NOT TO SCALE

NOTE:

SHELTER SHALL BE MODEL NO. SL612-2LSW AS MANUFACTURED BY BRASCO INTERNATIONAL, INC., FEATURES AS FOLLOWS:

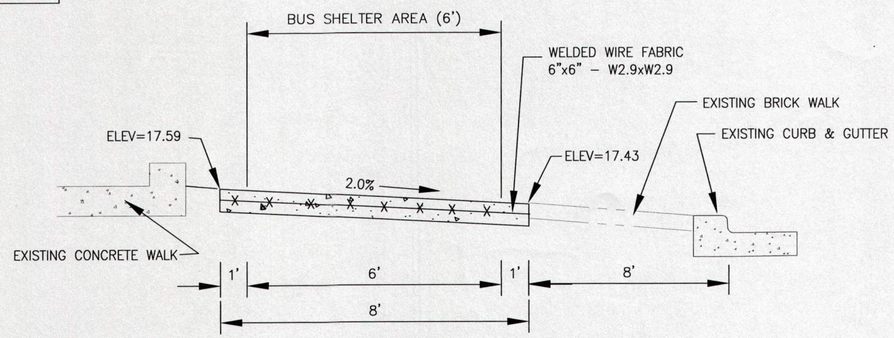
- DARK BRONZE ANODIZED ALUMINUM STRUCTURE WITH FRONT WINDSCREEN
- 1/4" CLEAR TEMPERED SAFETY GLASS
- BRONZE STANDING SEAM METAL HIP ROOF WITH FASCIA AND INTEGRAL GUTTER
- FULL LENGTH ALUMINUM BENCH WITH BACKREST



NOTES:

CONCRETE SLAB FOR BUS SHELTER SHALL BE CLASS A3 CONCRETE WITH A THICKNESS OF 6 INCHES.

TION A-A
TO SCALE



NOTES:

CONCRETE SLAB FOR BUS SHELTER SHALL BE CLASS A3 CONCRETE WITH A THICKNESS OF 6 INCHES.

SECTION B-B
NOT TO SCALE

REVISIONS
Date: INITALS COMMENTS

DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: ITB No. 0401 Sheet 5 of 15

UNION STATION
BUS SHELTER
DETAILS

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

MATCH LINE SEE SHEET 6

MATCH LINE SEE SHEET 7

KING STREET

CALLAHAN STREET

EXISTING SANITARY SEWER

EXISTING STORM SEWER

CONCRETE LEADER WALK

EXISTING BRICK WALK

CONCRETE BRIDGE ABUTTMENT

CONCRETE RAMP

CONCRETE WALK

CONCRETE WALL

BRICK WALK

BUS STOP

STAIRWAY

PED. TUNNEL

TRAIN STATION

TRAIN TRACKS

BREEZE WAY

ASPHALT PARKING LOT

STONE MONUMENT

FLAG POLE

TEL.POLE GUARD RAIL

EXISTING LIGHT BASE

APPROXIMATE LOCATION OF PLANTATION PIPELINE

DUMPSTER

ELEC. TRANS.

COMMUNITY FOR BRIDGE CLEARANCE SIGN

LEGEND

G.I. GRATE INLET
MH MANHOLE
TR TRAFFIC BOX

Scale 1" = 20'

DESIGN ENGINEER:	Date:	
CADD ENGINEER:	Date:	
DIVISION CHIEF:	Date:	
CITY ENGINEER:	Date:	
DIRECTOR T&ES:	Date:	

REVISIONS

Date: INITALS COMMENTS

Scale: 1"=20' ITB No. 0401 Sheet 6 of 15

UNION STATION
EXISTING CONDITIONS

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

CALLAHAN STREET

APPROXIMATE LOCATION OF PLANTATION PIPELINE

MATCH LINE SEE SHEET 6

MATCH LINE SEE SHEET 7

LEGEND

G.I.	GRATE INLET
MH	MANHOLE
TR	TRAFFIC BOX
FH	FIRE HYDRANT
	VALVE

20 0 20 40 60

Scale 1" = 20'

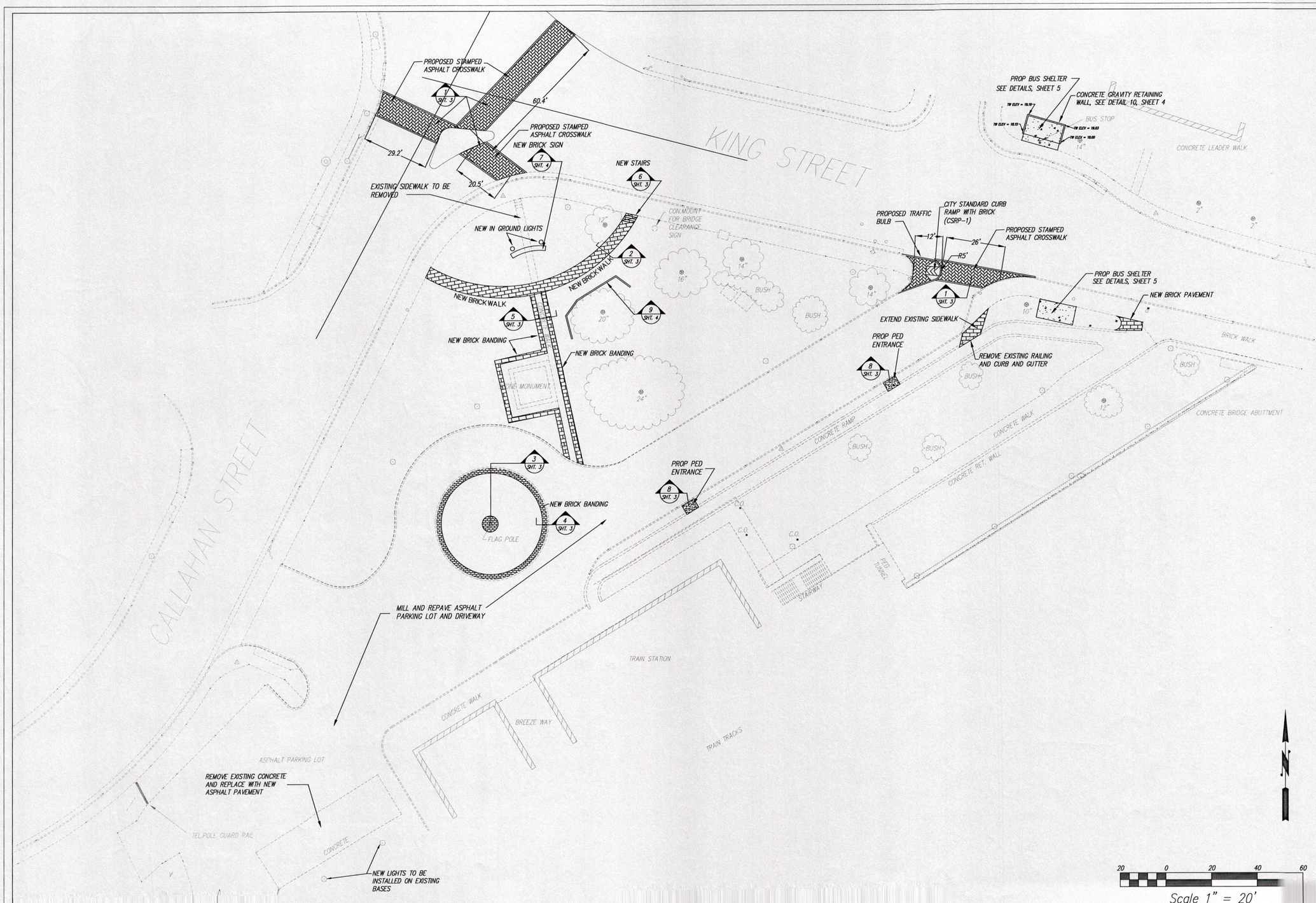
UNION STATION
EXISTING CONDITIONS

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA,VIRGINIA 22313

REVISIONS	
Date:	INITALS COMMENTS

DESIGN ENGINEER:	Date:
CADD ENGINEER:	Date:
DIVISION CHIEF:	Date:
CITY ENGINEER:	Date:
DIRECTOR T&ES:	Date:

Scale: 1"=20' ITB No. 0401 Sheet 7 of 15



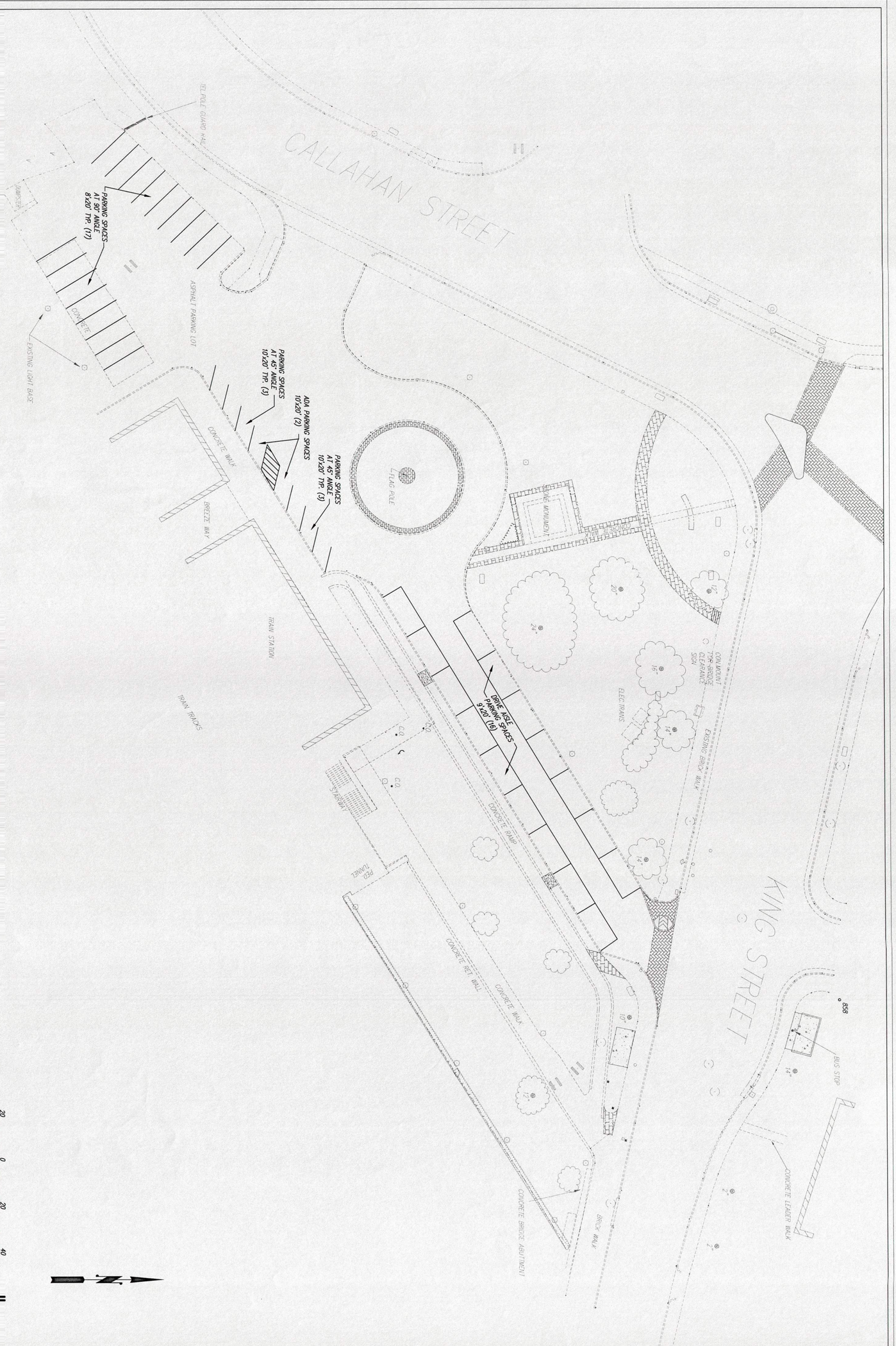
UNION STATION
PEDESTRIAN
IMPROVEMENTS

REVISIONS	
Date:	INITALS COMMENTS

DESIGN ENGINEER:	Date:
CADD ENGINEER:	Date:
DIVISION CHIEF:	Date:
CITY ENGINEER:	Date:
DIRECTOR T&ES:	Date:

Scale: 1"=20' ITB No. 0401 Sheet 8 of 15

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313



CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

UNION STATION STRIPING PLAN

DESIGN ENGINEER: _____ Date: _____
CADD ENGINEER: _____ Date: _____
DIVISION CHIEF: _____ Date: _____
CITY ENGINEER: _____ Date: _____
DIRECTOR T&ES: _____ Date: _____

REVISIONS
Date: INITALS COMMENTS

Scale: 1"=20' ITB No. 0401 Sheet 9 of 15

KING STREET

CALLAHAN STREET

CONCRETE LEADER WALK

BUS STOP

CONCRETE BRIDGE ABUTTMENT

CONCRETE RAMP

CONCRETE WALK

CONCRETE RETAINING WALL

CONCRETE WALK

BRICK WALK

EXISTING BRICK WALK

CON.MOUNT FOR-BRIDGE CLEARANCE SIGN

STONE MONUMENT

FLAG POLE

ELEC.TRANS.

TRAIN STATION

TRAIN TRACKS

BREEZE WAY

ASPHALT PARKING LOT

TEL.POLE GUARD RAIL

EXISTING LIGHT BASE

DUMPSTER

STAIRWAY

PEDESTRIAN TUNNEL

LEGEND

G.I. GRATE INLET
MH MANHOLE
TR TRAFFIC BOX

20 0 20 40

Scale 1" = 20'

REVISIONS	
Date:	INITALS COMMENTS

DESIGN ENGINEER:	Date:
CADD ENGINEER:	Date:
DIVISION CHIEF:	Date:
CITY ENGINEER:	Date:
DIRECTOR T&ES:	Date:

Scale: 1" = 20' ITB No. 0401 Sheet 10 of 15

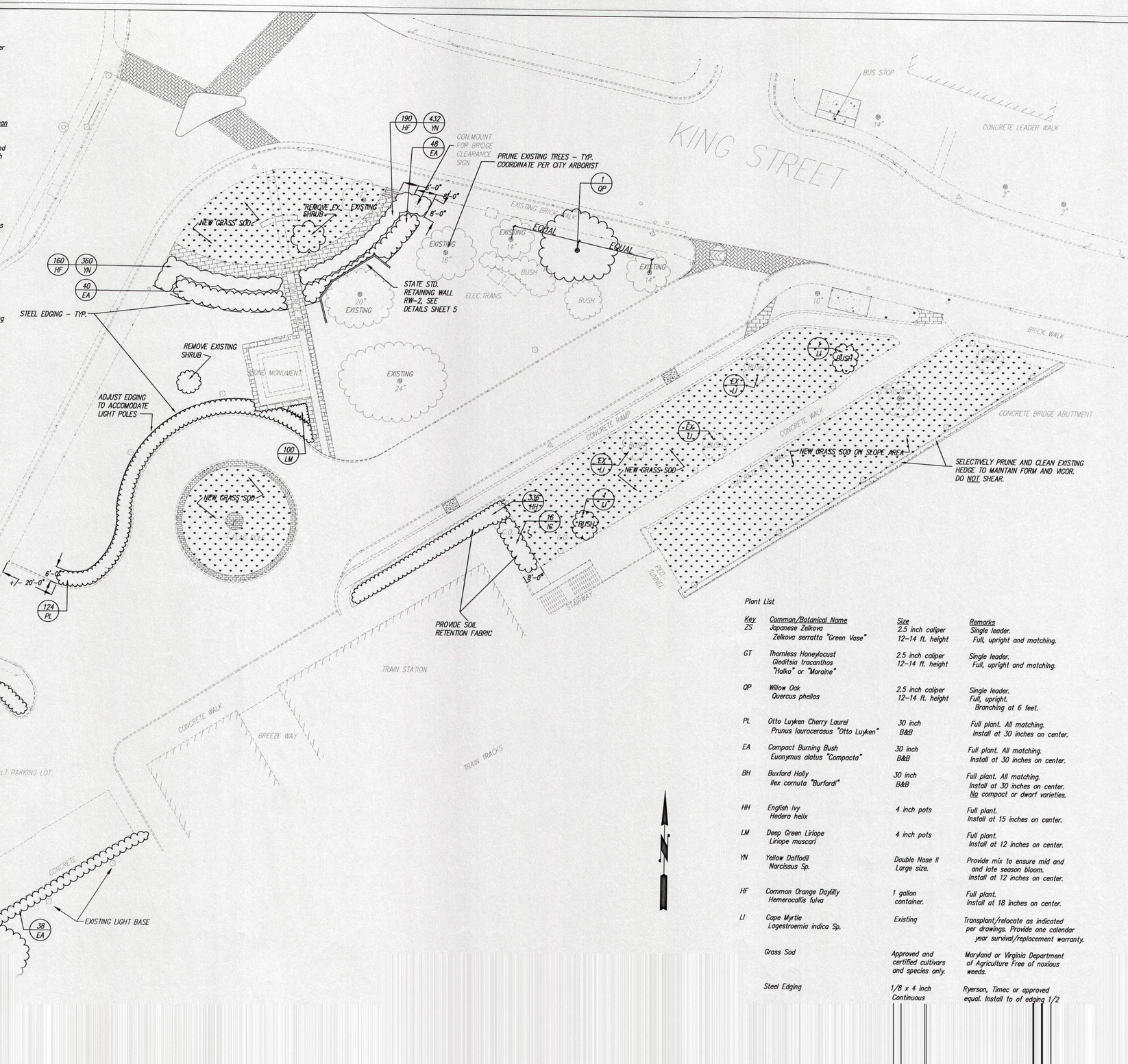
UNION STATION
PROPOSED GRADING

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

Landscape Notes

1. *Verify all existing conditions and proposed field work with contracting officer prior to work start.*
2. *Contact Miss Utility for verification of all utilities and easements prior to work start.*
3. *Repair all damage to existing conditions to the satisfaction of the contracting officer.*
4. *All plant material shall be graded and comply with ANSI Z60.1, The American Standard for Nursery Stock – current and most up to date edition.*
5. *All work shall be performed in compliance with installation specifications and guidelines for landscape plantings in the National Capital Area as set forth by the Landscape Specification Guidelines (of the) Landscape Contractor's Association of Maryland, DC and Virginia–4th Edition.*
6. *Shrub plantings shall be installed in continuous planting beds with appropriate soil amendments, topsoil, shredded hardwood mulch and other planting amendments.*
7. *Provide soil retention fabric (Tivek, jute mesh or approved equal) continuous in designated areas with 12 inch overlap at all splices. Stake or pin to slope as required to retain slope integrity.*
8. *Sitework (grading/earthwork, sidewalk, steps, sign, plantings) at intersection of King Street and Callahan Drive shall be specifically coordinated with the City of Alexandria Department of Transportation & Environmental Engineering Services.*
9. *Quercus phellos (QP) to be planted at 30' on center along Callahan Street, set approximately 2-1/2' behind sidewalk.*

MATCH LINE SEE SHEET 11
MATCH LINE SEE SHEET 12



Plant List

Key	Common/Botanical Name	Size	Remarks
ZS	Japanese Zelkova *Zelkova serratta "Green Vase"*	2.5 inch caliper 12–14 ft. height	Single leader. Full, upright and matching.
GT	Thornless Honeylocust *Gleditsia tracanthos "Halka" or "Moraine"*	2.5 inch caliper 12–14 ft. height	Single leader. Full, upright and matching.
QP	Willow Oak *Quercus phellos*	2.5 inch caliper 12–14 ft. height	Single leader. Full, upright. Branching at 6 feet.
PL	Otto Luyken Cherry Laurel *Prunus laurocerasus "Otto Luyken"*	30 inch B&B	Full plant. All matching. Install at 30 inches on center.
EA	Compact Burning Bush *Euonymus alatus "Compacta"*	30 inch B&B	Full plant. All matching. Install at 30 inches on center.
BH	Buxford Holly *Ilex cornuta "Burfordi"*	30 inch B&B	Full plant. All matching. Install at 30 inches on center. No compact or dwarf varieties.
HH	English Ivy *Hedera helix*	4 inch pots	Full plant. Install at 15 inches on center.
LM	Deep Green Liriope *Liriope muscari*	4 inch pots	Full plant. Install at 12 inches on center.
YN	Yellow Daffodil *Narcissus Sp.*	Double Nose II Large size.	Provide mix to ensure mid and and late season bloom. Install at 12 inches on center.
HF	Common Orange Daylilly *Hemerocallis fulva*	1 gallon container.	Full plant. Install at 18 inches on center.
LI	Cape Myrtle *Lagestroemia indica Sp.*	Existing	Transplant/relocate as indicated per drawings. Provide one calendar year survival/replacement warranty.
	Grass Sod	Approved and certified cultivars and species only.	Maryland or Virginia Department of Agriculture Free of noxious weeds.
	Steel Edging	1/8 x 4 inch Continuous	Ryerson, Timec or approved equal. Install to of edging 1/2

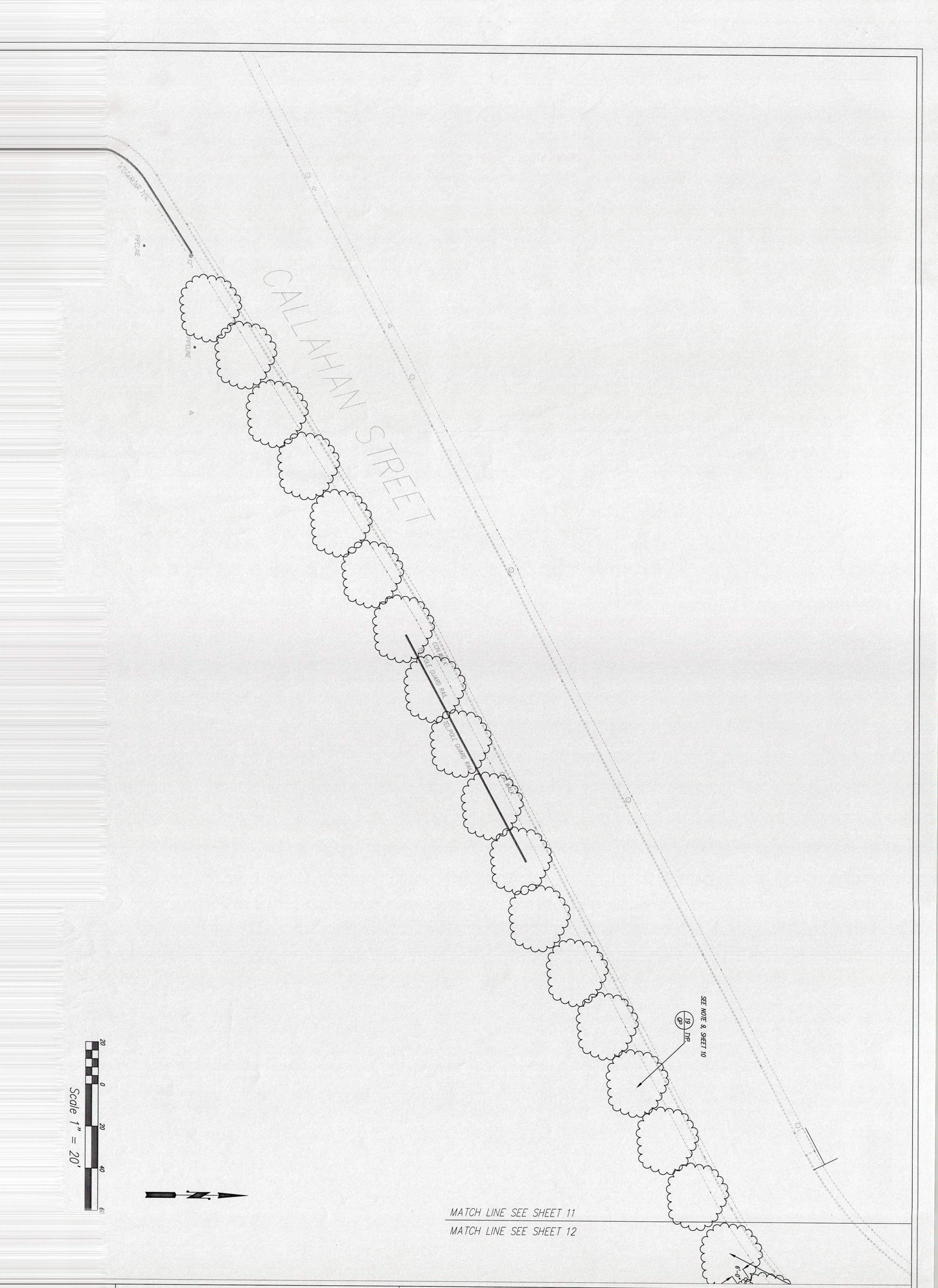
DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

REVISIONS
Date: INITALS COMMENTS

Scale: 1"=20' ITB No. 0401 Sheet 11 of 15

UNION STATION
LANDSCAPE PLAN

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313



CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

UNION STATION LANDSCAPE PLAN

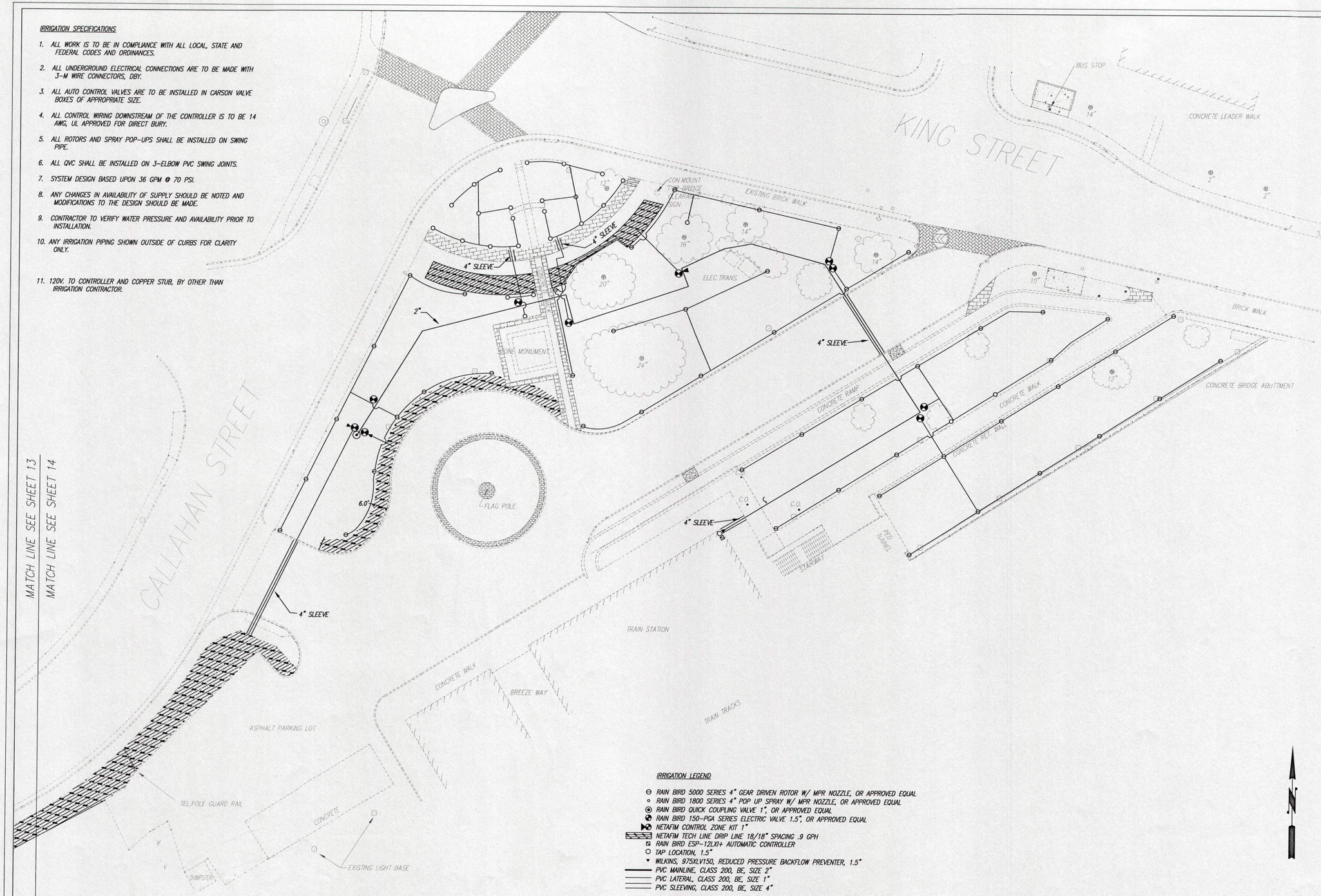
DESIGN ENGINEER: _____ Date: _____
CADD ENGINEER: _____ Date: _____
DIVISION CHIEF: _____ Date: _____
CITY ENGINEER: _____ Date: _____
DIRECTOR T&ES: _____ Date: _____

REVISIONS
Date: INITALS COMMENTS

Scale: 1"=20' ITB No. 0401 Sheet 12 of 15

IRRIGATION SPECIFICATIONS

1. *ALL WORK IS TO BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES AND ORDINANCES.*
2. *ALL UNDERGROUND ELECTRICAL CONNECTIONS ARE TO BE MADE WITH 3-M WIRE CONNECTORS, DBY.*
3. *ALL AUTO CONTROL VALVES ARE TO BE INSTALLED IN CARSON VALVE BOXES OF APPROPRIATE SIZE.*
4. *ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 14 AWG, UL APPROVED FOR DIRECT BURY.*
5. *ALL ROTORS AND SPRAY POP-UPS SHALL BE INSTALLED ON SWING PIPE.*
6. *ALL QVC SHALL BE INSTALLED ON 3-ELBOW PVC SWING JOINTS.*
7. *SYSTEM DESIGN BASED UPON 36 GPM @ 70 PSI.*
8. *ANY CHANGES IN AVAILABILITY OF SUPPLY SHOULD BE NOTED AND MODIFICATIONS TO THE DESIGN SHOULD BE MADE.*
9. *CONTRACTOR TO VERIFY WATER PRESSURE AND AVAILABILITY PRIOR TO INSTALLATION.*
10. *ANY IRRIGATION PIPING SHOWN OUTSIDE OF CURBS FOR CLARITY ONLY.*
11. *120V. TO CONTROLLER AND COPPER STUB, BY OTHER THAN IRRIGATION CONTRACTOR.*



IRRIGATION LEGEND

- *RAIN BIRD 5000 SERIES 4" GEAR DRIVEN ROTOR W/ MPR NOZZLE, OR APPROVED EQUAL*
- *RAIN BIRD 1800 SERIES 4" POP UP SPRAY W/ MPR NOZZLE, OR APPROVED EQUAL*
- *RAIN BIRD QUICK COUPLING VALVE 1", OR APPROVED EQUAL*
- *RAIN BIRD 150-PGA SERIES ELECTRIC VALVE 1.5", OR APPROVED EQUAL*
- *NETAFIM CONTROL ZONE KIT 1"*
- *NETAFIM TECH LINE DRIP LINE 18/18" SPACING .9 GPH*
- *RAIN BIRD ESP-12LXI+ AUTOMATIC CONTROLLER*
- *TAP LOCATION, 1.5"*
- *WILKINS, 975XLV150, REDUCED PRESSURE BACKFLOW PREVENTER, 1.5"*
- *PVC MAINLINE, CLASS 200, BE, SIZE 2"*
- *PVC LATERAL, CLASS 200, BE, SIZE 1"*
- *PVC SLEEVING, CLASS 200, BE, SIZE 4"*

N

20 0 20 40

Scale 1" = 20'

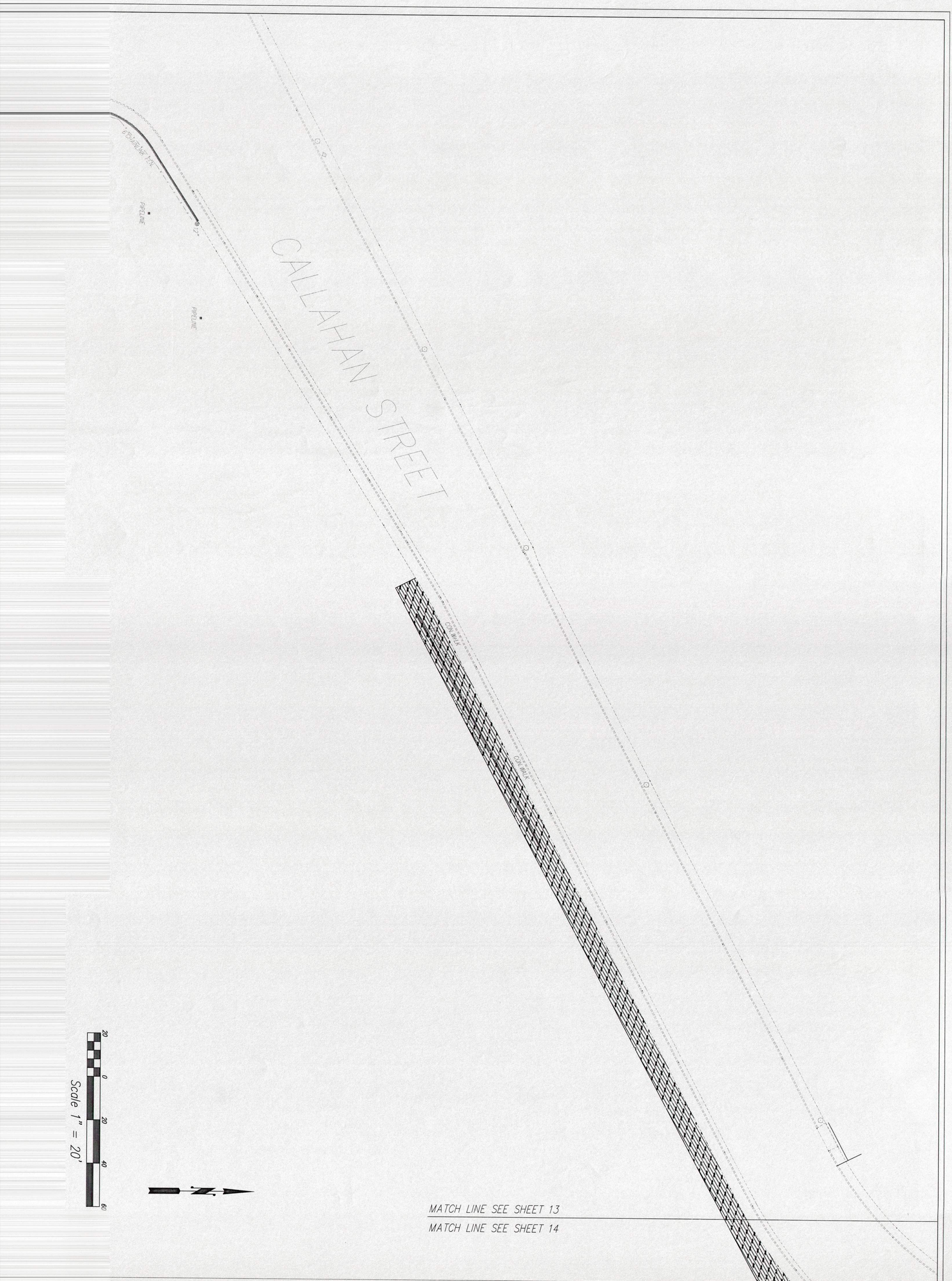
REVISIONS	
Date:	INITALS COMMENTS

DESIGN ENGINEER:	Date:
CADD ENGINEER:	Date:
DIVISION CHIEF:	Date:
CITY ENGINEER:	Date:
DIRECTOR T&ES:	Date:

Scale: 1"=20' ITB No. 0401 Sheet 13 of 15

UNION STATION IRRIGATION PLAN

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313



CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA,VIRGINIA 22313

UNION STATION
IRRIGATION PLAN

DESIGN ENGINEER:_____ Date:_____
CADD ENGINEER:_____ Date:_____
DIVISION CHIEF: _____ Date:_____
CITY ENGINEER: _____ Date:_____
DIRECTOR T&ES:_____ Date:_____

REVISIONS
Date: INITALS COMMENTS

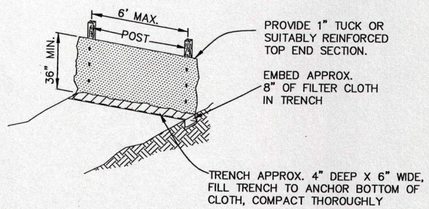
Scale: 1"=20' ITB No. 0401 Sheet 14 of 15

GENERAL EROSION AND SEDIMENTATION NOTES

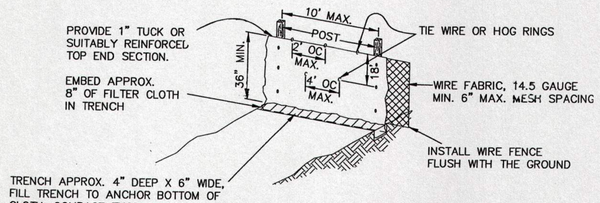
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL EROSION CONTROL DEVICES PERIODICALLY AND AFTER EVERY ERODIBLE RAINFALL. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
2. ALL EROSION AND SILTATION MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
3. DURING CONSTRUCTION, ALL STORM INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
4. INLET PROTECTION: ADDITIONAL METHODS FOR STORM DRAIN INLET PROTECTION NOT SHOWN MUST BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS SECTION 3.07, STORM INLET PROTECTION, THE 1992 VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
5. ALL EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENTATION CONTROL HANDBOOK AND SECTION 1.5 OF THE E&S REGULATIONS OF THE VIRGINIA DIVISION OF SOIL AND WATER CONSERVATION (VR625-02-00).
6. IF DURING CONSTRUCTION ADDITIONAL EROSION CONTROL DEVICES ARE FOUND NECESSARY, THEY SHALL BE INSTALLED AS DIRECTED BY THE CITY OF ALEXANDRIA.
7. ALL CONSTRUCTION DISCHARGE WATER SHALL BE ADEQUATELY FILTERED TO REMOVE SILT PRIOR TO DISCHARGE INTO WATERWAYS AND WETLANDS.
8. ALL ACTIVITIES ON THE SITE MUST COMPLY WITH SECTION 5-4, CODE OF ORDINANCES, CITY OF ALEXANDRIA.

SILT FENCE NOTES

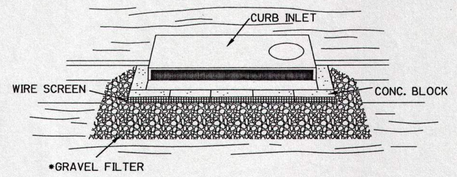
1. SILT FENCE AND FILTER FABRIC MUST BE ENTRENCHED.
2. POST FOR SILT FENCES SHALL BE EITHER 2.5x2 INCH DIAMETER WOOD OR 1.25 POUNDS PER LINEAR FOOT STEEL WITH MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
3. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 36" IN HEIGHT, A MINIMUM OF 14.5 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES.
4. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MIN. OF 24 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED, WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
5. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POST.
6. SEDIMENT MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
7. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
8. SILT FENCE SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.



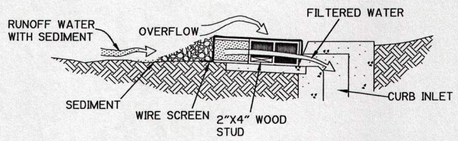
EXTRA STRENGTH FILTER CLOTH FABRIC
(WITHOUT WIRE)



STANDARD STRENGTH FILTER CLOTH FABRIC



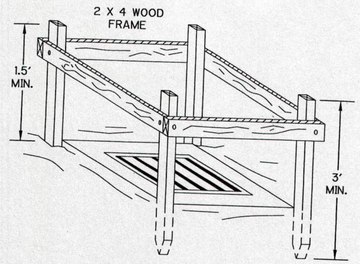
DROP INLET PROTECTION



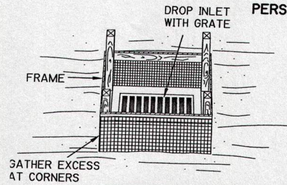
BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER
SPECIFIC APPLICATION

NONE

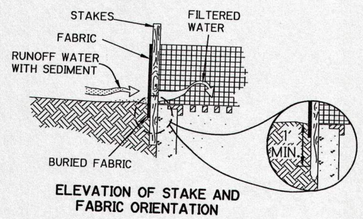
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.
•GRAVEL SHALL BE VDOT #3, #357, OR #5 COARSE AGGREGATE.



PERSPECTIVE VIEW OF FRAME



PERSPECTIVE VIEW



ELEVATION OF STAKE AND FABRIC ORIENTATION

SILT FENCE DROP INLET PROTECTION
SPECIFIC APPLICATION

NONE

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH A STREET OR HIGHWAY MEDIANS.

REVISIONS
Date: INITALS COMMENTS

DESIGN ENGINEER: Date:
CADD ENGINEER: Date:
DIVISION CHIEF: Date:
CITY ENGINEER: Date:
DIRECTOR T&ES: Date:

Scale: Project No. Sheet 15 of 15

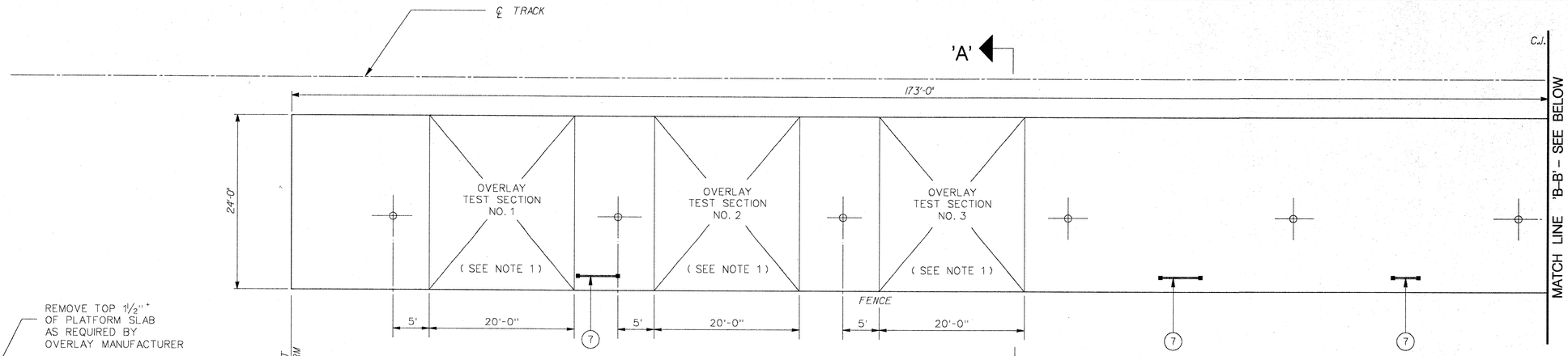
UNION STATION
EROSION AND
SEDIMENT CONTROL

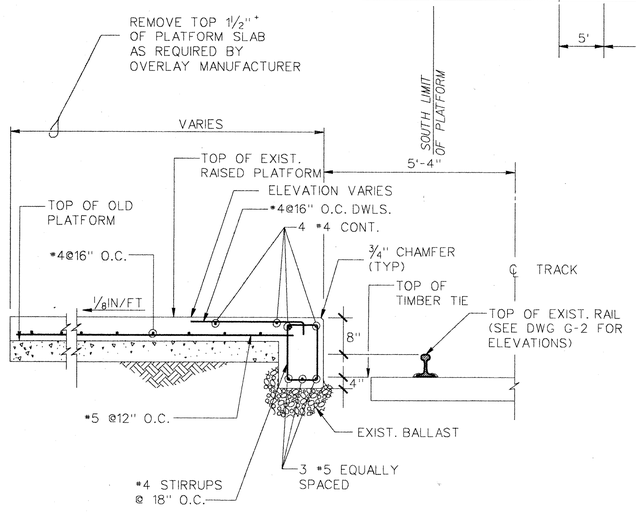
CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
P. O. BOX 178
ALEXANDRIA, VIRGINIA 22313

ATTACHMENT L.6

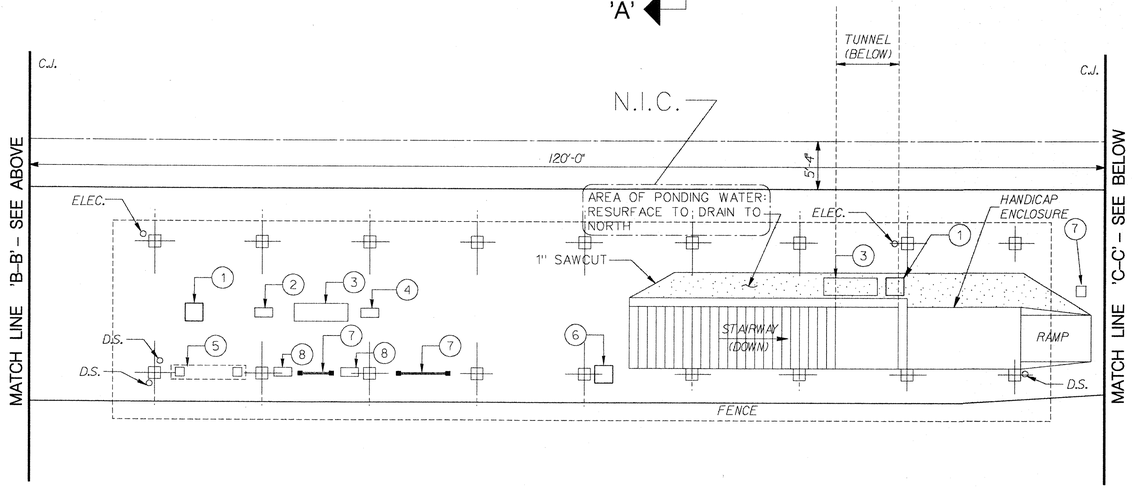
Record Drawings

1996
Alexandria Station Platform Repairs





SECTION 'A–A'
EXISTING REINFORCED SLAB IN SLAB



NOTES:

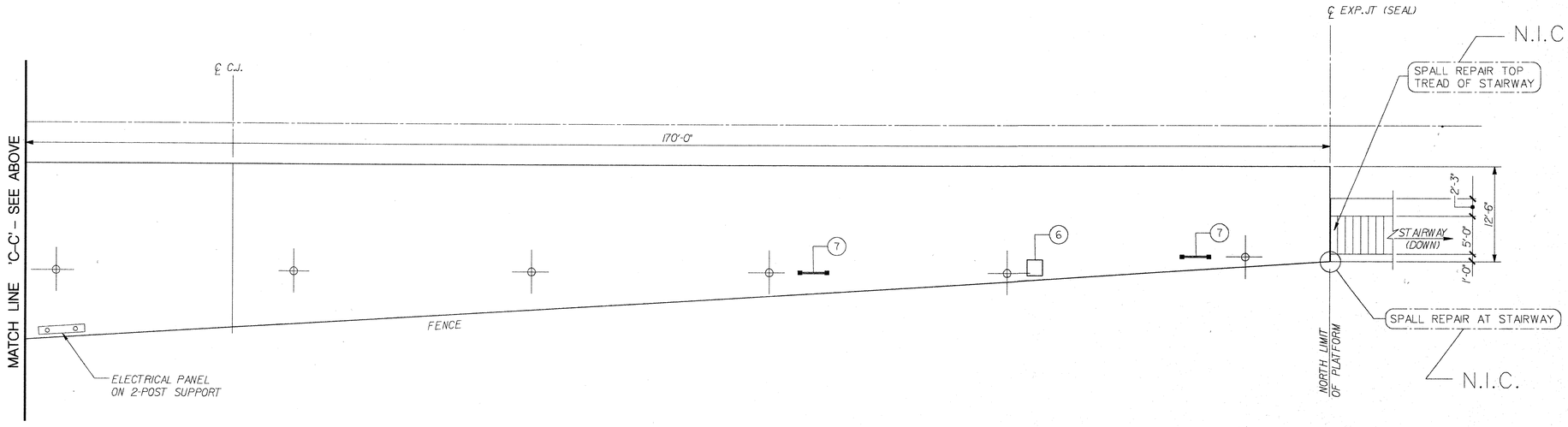
1. REFER TO THE SPECIFICATIONS FOR CONCRETE REPAIR MATERIALS TO BE USED AT TEST SECTIONS.
2. ALL PLATFORM FACILITIES SHOWN ON THIS SHEET ARE EXISTING AND ARE FOR INFORMATIONAL PURPOSES ONLY.
3. TOTAL PLATFORM REPAIR IS NOT A PART OF THIS CONTRACT.

LEGEND

1. TRASH
2. PHONE
3. BENCH
4. TICKET VALIDATOR
5. NEWSPAPER (VENDOR)
6. PAPER (RECYC)
7. SIGN
8. TICKET (VENDOR)

LIGHT POLE

CANOPY COLUMN



o:\dgn\vre\alex\vre_s5.sht
Wed May 29 08:50:13 1996

COMMONWEALTH OF VIRGINIA
RONALD F. KLEPPINGER
No. 7232
PROFESSIONAL ENGINEER

DESIGNED: R.A.F.				
DRAWN: W.L.				
CHECKED: K.T.				
APPROVED: R.F.K.	No.	DATE	DESCRIPTION	BY
	REVISIONS			

DE LEUW CATHER AND COMPANY
IN ASSOCIATION WITH
DEWBERRY & DAVIS
VICTOR WILBURN ARCHITECTS
DESIGNER:

VIRGINIA RAILWAY EXPRESS
NVTC/PRTC
SCALE: 16" = 1'-0" DATE: MAY 24, 1996
ALEXANDRIA STATION
PLATFORM REPAIRS

CONTRACT No. IFB NVTC 96-1
DRAWING No. S-5
SHEET No. 9