Henry P. Roybal
Commissioner, District 1

Miguel M. Chavez
Commissioner, District 2

Robert A. Anaya
Commissioner, District 3

Kathy Holian
Commissioner, District 4

Elizabeth Stefanics
Commissioner, District 5

Katherine Miller
County Manager

June 9, 2016

SANTA FE COUNTY
FIRE TRAINING TOWER FOUNDATION
IFB #2016-0302-FD/IC

ADDENDUM #1

Dear Bidders,

This addendum is issued to reflect the following immediately. It shall be the responsibility of interested bidder to adhere to any changes or revisions to the IFB as identified in this Addendum No. 1. This documentation shall become permanent and made part of the departmental files.

CLARIFICATION-
Location of work:
The project is located at 58 Caja de Oro Road, Santa Fe, NM at the Agua Fria Fire Station No. 1.

Description of work:
The work consists of forming and pouring 6 pads for a fire training tower building foundation- 1pad for a staircase, 5 feet of sidewalk around the perimeter of the structure, excavation of trench for electricity and connection of electricity to the training structure, excavation of trench for propane to structure (local supplier will perform connection) installation of two 6 inch ballards to protect the propane tank and approximately 12,015 sf of 6 inch thick asphalt at the Agua Fria Fire Station No. 1 in accordance with the plans provided by Santa Fe County.

DRAWINGS

Replace drawings with the revised versions, attached.

Please add this Addendum #1 to the original bid documents and refer to bid documents, hereto as such. This and all subsequent addenda will become part of any resulting contract documents and have effects as if original issued. All other unaffected sections will have their original interpretation and remain in full force and effect.

Proponents are reminded that any questions or need for clarification must be addressed to Iris Cordova, Senior Procurement Specialist at icordova@santafecountynm.gov.

STRUCTURAL FOUNDATION PLANS
SANTA FE COUNTY AGUA FRIA FIRE & RESCUE STATION NO. 1
FIRE TRAINING FACILITY

58 COUNTY ROAD 62, SANTA FE, NM 87507

ABBREVIATIONS

/	Per
@	At
AB	Anchor Bolt
ADDNL	Additional
ADJ	Adjacent
AFF	Above Finish Floor
ALT	Alternative
APA	American Plywood Association
APPROX	Approximate
ARCH	Architect or Architectural
B/ , B.O.	Bottom of
BG	Backgouge
BLDG	Building
BLKG	Blocking
BM	Beam
BN	Boundary Nail
BOT or B	Bottom
BOF	Bottom of Footing
BOS	Bottom of Steel
BRG	Bearing
BSMT	Basement
BTWN	Between
CC	Center to Center
CG	Center of Gravity
CIP	Cast-In-Place
CJ	Control Joint
CJP	Complete Joint Penetration
CL	Centerline
CLG	Ceiling
CLR	Clear
CMU	Concrete Masonry Unit
COL	Column
CONC	Concrete
CONN	Connection
CONST	Construction
CONT	Continue or Continuous
CONTR	Contractor
COORD	Coordinate
CSJ	Construction Joint
CTR(D)	Center(ed)
d	Penny
DBL	Double
DEG	Degree
DIA or Ø	Diameter
DIAG	Diagonal
DIM	Dimension
DL	Dead Load
DN	Down
DP	Drilled Pier
DT	Precast Double Tee
DTL (S)	Detail(s)
DWL(S)	Dowel(s)
EXIST	Existing
EA	Each
EC	Epoxy Coated
EE	Each End
EF	Each Face
EJ	Expansion Joint
EL	Elevation
EMBED	Embedded
EN	Edge Nail
ENGR	Engineer
EOR	Engineer-of-Record
EOS	Edge of Slab
EQ	Equal
EQ SP	Equally Spaced
EQUIP	Equipment
ES	Each Side
EW	Each Way
EXP ANCH	Expansion Anchor
EXP	Expansion
EXT	Exterior
FAB	Fabricate
FF	Finished Floor
FLG	Flange
FLR	Floor
FDTN	Foundation
FO	Face Of
FP	Full Penetration
FRMG	Framing
FS	Far Side
FT	Foot or Feet
FTG	Footing
FV	Field Verify
GA	Gage or Gauge
GALV	Galvanized
GL	Glu-lam
GR	Grade
GR BM	Grade Beam
HAS	Headed Anchor Stud
HD	Hold Down
HDG	Hot Dipped Galvanized
HK	Hook
HORIZ	Horizontal
HT	Height
HVAC	Heating-Ventilating and A/C
ID	Inside Diameter
I.F.	Inside Face
IN	Inch
INT	Interior
IT	Precast Inverted Tee Beam
JST	Joist
JT	Joint
K	Kip
KSI	Kips per Square Inch
L or LG	Length
LB (S)	Pound(s)
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LOC (S)	Location(s) or Locate
LONG	Longitudinal
LSL	Laminated Strand Lumber
LT	Light
LT WT	Light Weight
LVL	Level or Lam Veneer Lumber
LWC	Light Weight Concrete
MAS	Masonry
MATL	Material
MAX	Maximum
MBS	Metal Building Supplier
MCJ	Masonry Control Joint
MECH	Mechanical
MEP	Mechanical/Electrical/Plumbing
MIL(S)	Millimeter(s)
MIN	Minimum
MISC	Miscellaneous
ML	Micro-Lam
MNFR	Manufacturer
MO	Masonry Opening
MTL	Metal
N	North
NS	Non-Shrink or Near Side
NIC	Not in Contact
NO or #	Number
NOM	Nominal
NTS	Not To Scale
NWC	Normal Weight Concrete
OAE	Or Approved Equivalent
OC	On Center
OCEW	On Center Each Way
OD	Outside Diameter
O.F.	Outside Face
OPNG	Opening
OPP	Opposite
PAF	Powder Actuated Fastener
PC	Precast
PEN	Penetration
PERP	Perpendicular
PL	Plate
PLF	Pounds Per Lineal Foot
PREFAB	Prefabricated
PRELIM	Preliminary
PS	Prestressed
PSF	Pounds Per Square Foot
PSI	Pounds Per Square Inch
PT	Pressure Treated
QTY	Quantity
RAD or R	Radius
RC	Reinforced Concrete
RE: or REF	Refer to (Reference)
REINF	Reinforce(ing)(d)(ment)
RET	Return
REQD	Required
REQT(S)	Requirement(s)
RO	Rough Opening
(S)	Salvaged
SCHED	Schedule
SEC	Section
SIM	Similar
SLH	Short Leg Horizontal
SLV	Short Leg Vertical
SOG	Slab on Grade
SP @	Space At
SP	Space(s)
SPECS	Specifications
SPRT	Support
SS	Stainless Steel
STD	Standard
STIFF	Stiffener
STL	Steel
STR	Structural
SW	Shearwall
SYM	Symmetrical
T&B	Top & Bottom
T	Top
T/	Top of
TH	Thick or Thickness
Th.ROD	Threaded Rod
TL	Total Load
T.O.	Top of
TOC	Top of Concrete
TOF	Top of Footing
TOM	Top of Masonry
TOPG	Topping
TOS	Top of Steel
TOW	Top of Wall
TRANS	Transverse
TYP	Typical
ULT	Ultimate
UNO	Unless Noted Otherwise
VERT	Vertical
VIF	Verify In Field
W/O	Without
W/	With
WD	Width or Wood
WF	Wide Flange
WT	Weight
WWR	Welded Wire Reinforcement
WxH	Width x Height

LEGEND

SYMBOL	DESCRIPTION
	ELEVATION SYMBOL
	HOLD DOWN LOCATION
	HELICAL PILE LOCATION
	KEYED NOTE
	SUBGRADE
	DRAWING REVISION NUMBER
	CURRENT REVISION CLOUD
	RIGID INSULATION
	CAST IN PLACE CONCRETE
	WOOD FRAMED WALL
	DETAIL CUT
	SHEET REFERENCE
	BEAM OR HEADER
	FOOTING

PLAN SET INDEX

S001	COVER PAGE
S002	OUTLINE SPECIFICATIONS
S101	FOUNDATION PLAN AND DETAILS

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LTSE JOB # 1234
100% CD

AGUA FRIA FIRE & RESCUE STATION NO. 1,
FIRE TRAINING FACILITY
58 COUNTY ROAD 62, SANTA FE, NM 87507

REVISIONS		
NO.	DATE	COMMENTS

DRAWN BY: JAR
CHECKED BY: EDT
DATE: 12.9.2015
SCALE:
ORIGINAL SHT SIZE: 24"x36"

SHEET TITLE
Abbreviations, Legend and Plan Set Index

SHEET
S-001

STRUCTURAL OUTLINE SPECIFICATIONS FOR FIRE TRAINING FACILITY, SANTA FE, NEW MEXICO

I. DESIGN CRITERIA & GENERAL NOTES

A. Design Codes and Manuals:

1. 2009 International Building Code (IBC)
2. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures
3. American Society for Testing and Materials (ASTM)

B. DESIGN LOADS:

1. Minimum Uniformly Distributed Live Loads
   a) Roof Live……..50 PSF (per manufacturer)
   b) Roof Design Snow Load
      (1) Ground Snow Load, pg……..30 PSF
      (2) Flat Roof Snow Load, pf……..……22.7 PSF
      (3) Exposure Factor, ce……0.9
      (4) Snow Thermal Factor, ct……..……1.2
      (5) Snow Importance Factor, I……1.0
   c) Floor Live……..……..50 PSF (per manufacturer)
2. Minimum Uniformly Distributed Design Dead Loads
   a) Roof……..……(per manufacturer)
   b) Floor……..(per manufacturer)
   c) Superimposed Floor……...15 PSF (per manufacturer)
3. Wind Loading - ASCE 7-05
   a) Occupancy Category II
   b) Basic Wind Velocity (V) - (3 SECOND GUST) - 90 MPH
   c) Category II - Importance Factor = 1.0 - Exposure "C"
4. Earthquake Design Data - ASCE 7-05:
   a) IBC Site Classification "C"
   b) Occupancy Category II
   c) Seismic Importance Factor = 1.0
   d) Mapped Spectral Response Accelerations
      (1) Ss = 0.447,S1 = 0.143
   e) Spectral Response Coefficients
      (1) SDs = 0.357,SD1 = 0.158
   f) Seismic Design Category = "C"
   g) Basic Seismic-Force-Resisting System = per manufacturer
   h) Analysis Procedure Used = Equivalent Lateral Force Procedure

C. GENERAL NOTES

1. Any conflict between structural drawings and manufacturer drawings and/or specifications shall be brought to the attention of the structural engineer prior to proceeding with the work affected.
2. OPENINGS
   a) Openings, sleeves, etc. to be placed through any structural member shall first be approved by the structural engineer. Sleeves shall be provided for openings prior to placing of concrete. Cutting of hardened concrete shall not be permitted except by special structural approval which will be on an individual basis.
3. The contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to bracing and shoring for loads due to hydrostatic, earth, wind or seismic forces, construction equipment, etc. Observation visits to the site by the structural engineer shall not include inspection of the above items.
4. Cost of additional field and office work necessitated by requests by the contractor for an option of due to errors or omissions in construction shall be borne by the contractor. Options are for contractor's convenience, he shall be responsible for all changes necessary if he chooses an option and he shall coordinate all details.

D. Foundation Notes

1. Foundation design is based on building design reactions dated October, 2015; provided by Fire Training Structures, LLC, 3233 E. Corona Avenue, Phoenix, AZ 85040, (602) 268-6156.
   a) Cost of additional field and office work necessitated by requests by the contractor for other systems that require foundation revisions shall be borne by the contractor.
2. Geotechnical engineering study and recommendations for this project has been performed by Geo-Test, Inc., project number 1-70513, dated June 14, 2007.
   a) Important additional information concerning specific soil conditions is contained in this report and shall be reviewed prior to the start of construction.
   b) Design is based on recommendations provided by the geotechnical engineering study:
      (1) Allowable soil Bearing Pressure = 2000 psf
      (2) Frost Depth / Minimum Exterior Footing Embedment = 24"
3. The geotechnical engineering study contains specific requirements concerning clearing and grubbing, site, subfloor and bearing surface preparation, structural fill requirements, compaction requirements, and drainage and sloping requirements not necessarily shown on these drawings. Refer any conflicts between these drawings and the report to the architect for direction prior to beginning any work.
   a) The contractor shall engage and bear the cost of a geotechnical engineer or designated representative to monitor site preparation, foundation construction and retaining wall construction. The geotechnical engineer shall provide continuous on-site observation by experienced personnel during construction of controlled earthwork. The contractor shall notify the geotechnical engineer at least two working days in advance of any field operations of controlled earthwork or of any resumption of operations after stoppages. Tests of fill materials and embankments shall be made in accordance to the recommendations for observation and testing provided within the geotechnical recommendations, and at the following suggested minimum rates:
      (1) At least one moisture-density (proctor) test, atterberg limits test, and percent finer than #200 sieve test should be performed per each subgrade soil type and engineered fill material. The geotechnical engineer must review the test results for conformance with specifications and approve of fill materials and their intended use, prior to construction.
      (2) A minimum of one field density and moisture test should be performed per 2000 square feet of building pad fill or pavement subgrade per each 1 foot of compacted fill thickness (or at least one test per each 1 foot of compacted fill thickness in each area worked per day if smaller sections).
      (3) A minimum of one field density and moisture test should be performed per 50 linear feet of foundation excavation bottom prior to placement of reinforcing steel and concrete (or at least one test per area worked per day if smaller sections).
      (4) A minimum of one field density and moisture test should be performed per 100 linear feet of retaining wall backfill and/or utility trench backfill per each 1 foot of compacted fill thickness (or at least one test per each 1 foot of compacted fill thickness in each area worked per day if smaller sections).

II. QUALITY ASSURANCE PLAN AND STATEMENT OF SPECIAL INSPECTION

A. The contractor shall engage independent inspectors to implement special inspection. Special inspection shall conform to the IBC 2009, section 110 and chapter 17.

B. After each inspection and test, promptly submit copy of laboratory report to owner, architect/engineer, and to contractor. Report shall include:

1. Date issued, Project title and number, Name of inspector, Date and time of sampling or inspection, Identification of project specifications section, Location of project, Type of inspection or test, Date of tests, Results of tests, Conformance with contract documents

C. Required inspections:

1. Soils - as outlined in Outline Specifications Section titled "Foundation Notes"
2. Concrete - as outlined in the Outline Specifications Section titled "Structural Concrete"
   a) Installation of embedded bolts and plates supporting structure
   b) Reinforcing steel placement
   c) Field bending of reinforcing steel
   d) Reinforcing couplers
   e) Anchored rebar or threaded rods into hardened concrete

D. Special inspection is to be provided in addition to inspections conducted by the building department and shall not be construed to relieve the owner or his authorized agent from requesting the period and called inspections required by section 1704 of the International Building Code.

1. Periodic inspection is defined as the part-time or intermittent observation of work requiring inspection by an approved inspector who is present in the area where the work has been or is being performed at the completion of work.
2. Special inspection is required for the following:
   a) Concrete construction
      (1) Reinforcing steel……..periodic
      (2) Bolts installed prior to and during concrete placement……periodic
      (3) Mix design(S)……periodic
      (4) At the time fresh concrete is sampled……periodic
      (5) Inspection of concrete placement……periodic
      (6) Inspection for maintenance of specified curing techniques.....periodic
   b) Special case
      (1) Expansion or adhesive anchor……periodic

III. SHOP DRAWING SUBMITTAL

A. Contractor to submit to Structural Engineer:

1. Concrete Mix Designs
2. Reinforcing Bars

B. All shop drawings and submittals must be reviewed and stamped by the contractor prior to submittal. Shop drawings and submittals shall be accompanied by sealed calculations as required by the specifications. No fabrications shall proceed before shop drawings covering that work have been approved.

IV. STRUCTURAL CONCRETE

A. All concrete edges shall be chamfered 3/4" on exposed corners unless otherwise noted.

B. Basis for design, strength at 28 days:

1. Unless indicated otherwise, all concrete shall be ready- mixed concrete with standard stone aggregate (144 PCF).
2. Air entrainment shall conform to the requirements of ACI 318-05 Table 4.2.1
3. Shrinkage shall not exceed 0.02% per ASTM C 157 at 28 days. Shrinkage-compensating concrete shall conform to the recommendations of ACI 223.
4. Structural design is based upon ACI 318-05 and construction shall conform to ACI 301 and ACI 302, latest edition(s).
   a) F'c = 4000 psi (normal weight, air entrained)
      (1) Exposed concrete flatwork, Footings, Tie beams, Stem walls, Grade beams.
   b) F'c = 4000 psi (normal weight)
      (1) all other concrete
   c) F'c = 6000 psi non-shrink grout for placement under column base plates.
      (1) Grout to comply with ASTM C1107. Non-shrink flowable grout shall be used under base plates with shear lugs.
5. Unless otherwise indicated, concrete cover shall be:
   a) Foundations……3"
   b) Grade Beams……..3"
   c) Columns (Vertical Reinf.)……2"
   d) Slabs (Exposed to weather)……..1 1/2"

C. REINFORCING STEEL

1. Deformed Bars……ASTM A615 / Grade 60
2. Welded Wire Fabric……ASTM A185
3. Placing of reinforcing shall conform with CRSI, latest edition.
4. All reinforcing shall be held securely in position with standard accessories during placing of concrete.
5. Slab and beam bolsters and hi-chairs shall have vinyl-tipped turned-up legs where soffits/underside of slab is exposed.
6. All field bending of reinforcing shall be done cold. Heating of bars will not be permitted.
7. Unless otherwise indicated, splice reinforcing as follows:
   a) Reinforcing Bars……48 Bar Diameters
   b) Welded Wire Fabric……6"

D. CONCRETE PLACEMENT & TESTING

1. Unless otherwise indicated, five test cylinders shall be made every fifty cubic yards of concrete or fraction thereof on each day's pour. One cylinder shall be tested at 7 days and three at 28 days. The remaining cylinder shall be held in reserve as a spare. The making and testing of cylinders shall be conducted by an approved testing laboratory; contractor shall bear the cost of testing.
   a) Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
   b) Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
4. Maintain ALL reinforcement in position on chairs during concrete placement.

E. COLD WEATHER CONCRETING

1. All cold weather concrete work shall meet the requirements of ACI Committee 306, latest edition for cold weather concreting, if, for 3 consecutive days the average daily temperature drops below 40°F and stays below 50°F for more than one-half of any 24 hour period.
2. Do not use frozen materials containing ice or snow.
3. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
4. The use of calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators is not permitted; contractor shall utilize a high early strength mix design.

F. HOT WEATHER CONCRETING

1. All hot weather concrete work shall be in accordance with ACI 301. Maintain concrete temperature below 90°F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

G. EMBEDDED CONDUIT

1. Embedded conduits and/or pipes shall not be installed in slabs or columns, unless approved by the structural engineer, prior to construction.
2. Conduits and/or pipes shall be protected against rusting. Aluminum conduits and/or pipes shall not be embedded in concrete.

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ERIC D. TRUJILLO
NEW MEXICO
21656
PROFESSIONAL ENGINEER
12/9/15

ENGINEER'S SEAL
Eric D. Trujillo, PE
New Mexico License
Number 21656

LTSE JOB # 1234
100% CD

AGUA FRIA FIRE & RESCUE STATION NO. 1,
FIRE TRAINING FACILITY
58 COUNTY ROAD 62, SANTA FE, NM 87507

REVISIONS		
NO.	DATE	COMMENTS
1		
2		
3		

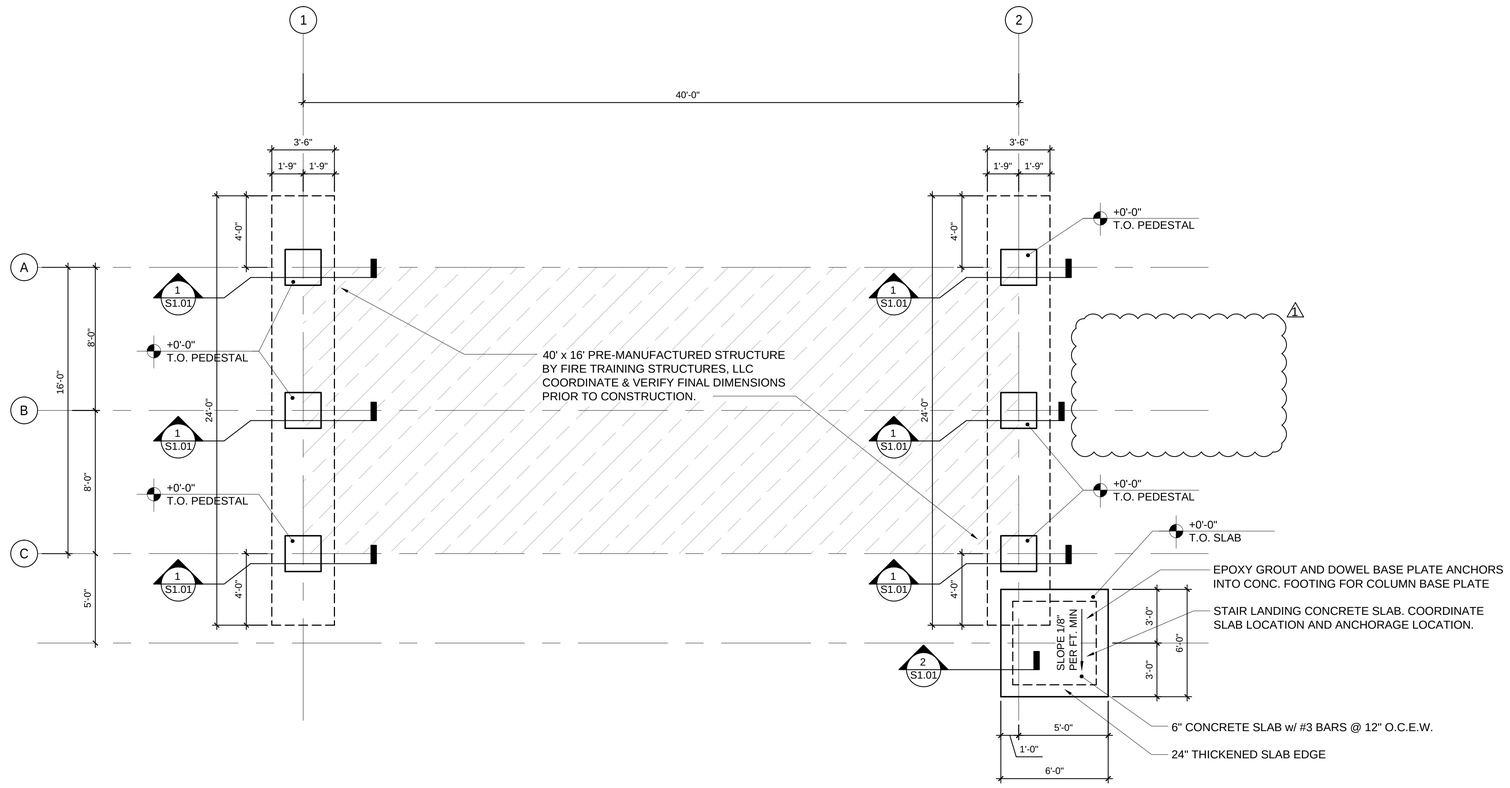
DRAWN BY: JAR
CHECKED BY: EDT
DATE: 12.9.2015
SCALE:
ORIGINAL SHT SIZE: 24"x36"

SHEET TITLE
Outline Specifications

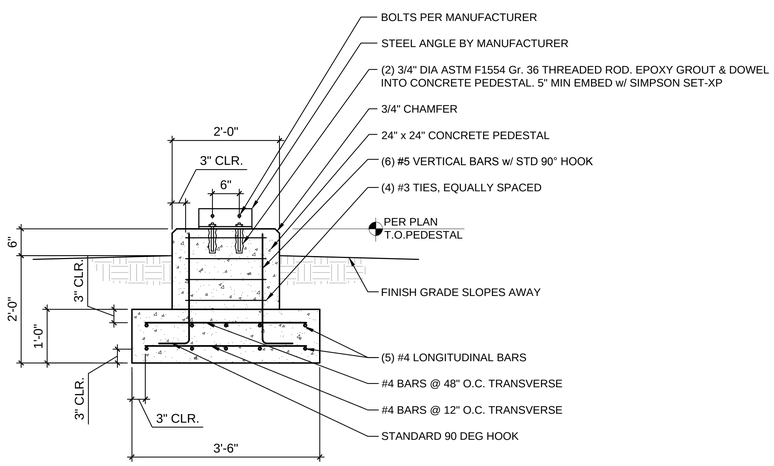
SHEET
S-002

GENERAL NOTES

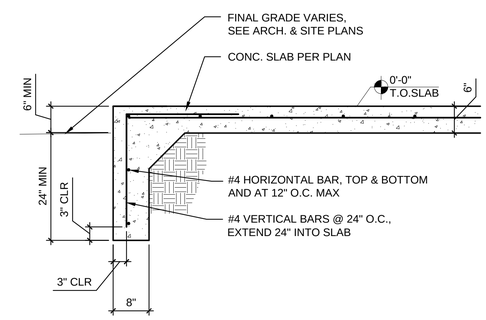
CONTRACTOR SHALL COORDINATE FINAL DIMENSIONS w/ TRAINING STRUCTURE MANUFACTURER PRIOR TO CONSTRUCTION. ANY REVISIONS TO FOUNDATION SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.



1S / S1.01 FOUNDATION PLAN
1/4" = 1'-0"



1 / S1.01 SECTION AT PEDESTAL
3/4" = 1'-0"



2 / S1.01 TURNED DOWN MONOLITHIC CONC. SLAB EDGE
3/4" = 1'-0"

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AGUA FRIA FIRE & RESCUE STATION NO. 1,
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58 COUNTY ROAD 62, SANTA FE, NM 87507

REVISIONS NO.	DATE	COMMENTS
1	6/8/16	REMOVED SPOT FOOTING, STAIR COLUMN NO LONGER REQUIRED HERE.
2		
3		

DRAWN BY:	JAR
CHECKED BY:	EDT
DATE:	12.9.2015
SCALE:	AS SHOWN
ORIGINAL SHT SIZE:	24"x36"

SHEET TITLE
Foundation Plan and Details

SHEET
S1.01