MANSFIELD
FIRE STATION No. 5



SOLARE
ENGINEERING UNLIMITED, INC.

a-d armstrong-douglass
structural engineers

KOMATSU
ARCHITECTURE

JD ENGINEERING
James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 101014-00

Leeming Design Group
Landscape Architecture
4913 Rufe Snow Drive, Suite 101-BNorth Richland Hills, Texas 76180
(817) 577-0889 Fax (817) 577-0896 leemingdesigngroup@sbcglobal.net

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

COVERSHEET

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	G0.00

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SYMBOLS LEGEND

101 — DOOR TAG

Room name
101 — ROOM NAME AND NUMBER

W1 — WINDOW TYPE AND NUMBER

F-1 — EXTERIOR FINISH DESIGNATION

1 — NOTES BY SYMBOL

1 — INTERIOR FINISH DESIGNATION

A — WALL TYPE

1 / A101 — DETAIL NUMBER / SHEET NUMBER
DETAIL CALLOUT

ELEVATION 100'-0" — FINISHED ELEVATION

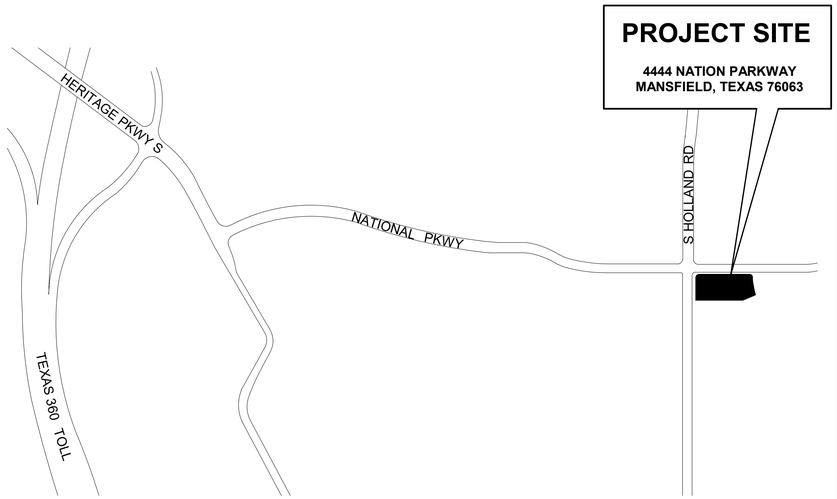
1 / A1.01 — SECTION MARK
SECTION NUMBER
SHEET NUMBER

1 / A1.01 — ELEVATION MARK
ELEVATION NUMBER
SHEET NUMBER

1 / A101 — DETAIL MARK
DETAIL NUMBER
SHEET NUMBER

A — COLUMN CENTERLINE

AREA MAP



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G0.03	COMCHECK

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C1.1	COORDINATE CONTROL POINT TABLE
C2.0	X-DAM
C3.0	P-DAM
C4.0	STORM DRAIN PLAN OVERALL
C4.1	STORM DRAIN LINE A
C4.2	STORM DRAIN LINE B
C4.3	STORM DRAIN LINE C
C4.4	STORM DRAIN CALCS
C4.5	STC 7200 STORMCEPTOR DETAIL
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PCO	PRECAST CURB INLET OUTSIDE ROADWAY

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A0.04	SITE DETAILS
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A4.02	WALL SECTIONS
A4.03	WALL SECTIONS
A4.04	WALL SECTIONS
A4.05	WALL SECTIONS
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A4.09	PLAN DETAILS
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S4.21	TYP-LIGHT GAUGE DETAILS
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No.	Description	Date
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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

SHEET INDEX

SHEET SIZE:	22 x 34
JOB NO:	2016.166
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SHEET:	G0.01

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TDLR REGISTRATION MANSFIELD FIRE STATION #5:	**TABS2020002795**
APPLICABLE CODES	2018 INTERNATIONAL BUILDING CODE
TYPE OF CONSTRUCTION	TYPE II-B (TABLE 601 FOR RATINGS)
PRIMARY STRUCTURAL FRAME	0 HOURS
BEARING WALLS - EXTERIOR	0 HOURS
BEARING WALLS - INTERIOR	0 HOURS
INT. NONBEARING WALLS/PARTITIONS	0 HOURS
EXT. NONBEARING WALLS/PARTITIONS	(TABLE 602)
X < 5	1 HOUR
5 ≤ X < 10	1 HOUR
10 ≤ X < 30	0 HOUR
X ≥ 30	0 HOUR
FIRE SPRINKLERS	YES
ALLOWABLE SQ. FT.	92,000 SF (TABLE 506.2)
ALLOWABLE BLDG HEIGHT:	75 FT (TABLE 504.3)
ALLOWABLE STORIES:	4 STORIES (TABLE 504.4)
OCCUPANCY TYPE:	(B) BUSINESS
TOTAL ACTUAL SQ. FT.	12867.87SF
BUSINESS (B)	11927.08 SF
MEZZANINE	940.79 SF
NUMBER OF STORIES:	1 STORY PLUS A MEZZANINE
OCCUPANT LOAD:	TABLE 1004.1.1
BUSINESS 100 GROSS (11927.08/150)	119.27 = 80 OL
ACTUAL OCCUPANT LOAD	**09 AOL**

* THE SIZE OF THE SHIFT WHICH EQUALS THE NUMBER OF BEDS IN THE BLDG.*

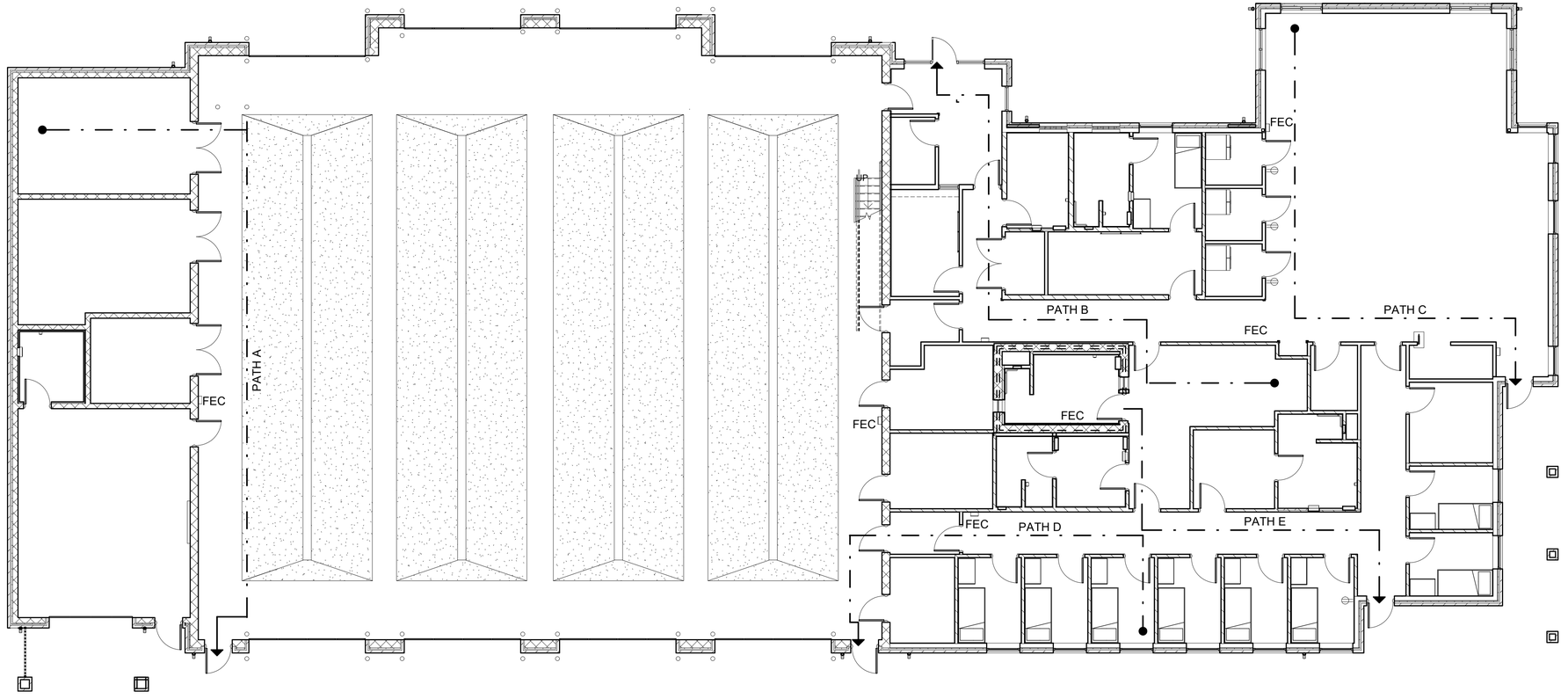
FIRE STATION STORM SHELTER:	ICC-500-2014 (USING ACTUAL OCCUPANT LOAD)
SAFE ROOM AREA:	112.09 SF_
AREA OF NO FURNISHINGS:	96 SF___
ADA OCCUPANTS:	10 SF PER OCCUPANT: 1 OL
OCCUPANTS:	5 SF PER OCCUPANT (96SF-10SF = 86SF/ 5SF):17 OL
TOTAL OCCUPANCY:	18 OL
REQUIRED MINIMUM EGRESS WIDTH	SECTION 1005.1
EGRESS WIDTH DOORS .2 INCHES PER OCCUPANT	REQUIRED: 80 OL X .2 = 16" PROVIDED: 160"
MINIMUM NUMBER OF EXITS OCCUPANCY B	(TABLE 1006.3.2 and TABLE 1006.3.3(2)) 2 PER FLOOR
EXIT ACCESS TRAVEL DISTANCE OCCUPANCY B WITH NO SPRINKLER	SECTION 1017 300'-0"
AREA SEPARATION WALL B - B	TABLE 508.4 NO SEPERATION REQUIREMENT
PLUMBING WATER CLOSET/LAVATORY:	TABLE 2902.1 BUSINESS - 1 PER 25 (FIRST 50) 1 PER 50 (REMAINING): 80 OL = 3
LAVATORY:	BUSINESS - 1 PER 40 (FIRST 80) 1 PER 80 (REMAINING): 80 OL = 2
SHOWER:	BUSINESS - NONE
MOP SINK:	BUSINESS - 1
DRINKING FOUNTAINS:	BUSINESS - 1 PER 100 ACTUAL WATER CLOSET = 10 (6 TOILETS/4 URINALS) ACTUAL LAVATORY = 7 ACTUAL SHOWER = 4 ACTUAL MOP SINK = 1 ACTUAL ELECTRIC WATER COOLERS: 2 - HI/LOW UNIT
PARKING REQUIREMENTS H/C SPACE (UNDER 100) PARKING SPACES	TABLE 1106.1 REQUIRED: 1 H/C SPACE PER 25 SPACES PROVIDED: 2 H/C PARKING SPACE 24 REGULAR PARKING SPACES 26 TOTAL PARKING SPACES

GENERAL NOTES / LEGEND

A. "= = = = = = " INDICATES 2-HR RATED WALL

B. FEC = FIRE EXTINGUISHER CABINET

TRAVEL DISTANCE	
Travel Path	Travel Distance
	0"
PATH A	92' - 4 3/8"
PATH B	78' - 7"
PATH C	69' - 4 1/4"
PATH D	60' - 11 3/4"
PATH E	53' - 11 15/16"



N

1 G0.02 FIRST FLOOR PLAN
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KIM A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

LIFE SAFETY PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	G0.02

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COMcheck Software Version 4.1.1.0

Envelope Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	
Location:	Mansfield, Texas
Climate Zone:	3a
Project Type:	New Construction
Vertical Glazing / Wall Area:	13%

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Building Area	Floor Area
1-Fire Station : Nonresidential	13153

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Insulation Entirely Above Deck: High Albedo Roof Exempt, High Albedo Roof Exemption = Steep Sloped Roof, [Bldg. Use 1 - Fire Station]	13153	---	25.0	0.039	0.039
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Fire Station] (c)	555	---	---	0.730	0.730
NORTH					
Exterior Wall 1: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - Fire Station]	269	---	10.0	0.083	0.123
Window 1: Metal Frame:Fixed, Perf. Specs.: Product ID Vitro Solarban 90 Clear, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	20	---	---	0.290	0.460
Exterior Wall 2: Steel-Framed, 16" o.c., [Bldg. Use 1 - Fire Station]	1415	19.0	5.0	0.071	0.064
Window 2: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Vitro Solarban 90 Clear, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	213	---	---	0.290	0.460
Window 3: Metal Frame with Thermal Break:Operable, Perf. Specs.: Product ID Vitro Solarban 90 Clear, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	42	---	---	0.290	0.600
Door 1: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	21	---	---	0.290	0.770
EAST					
Exterior Wall 3: Steel-Framed, 16" o.c., [Bldg. Use 1 - Fire Station]	1629	19.0	5.0	0.071	0.064
Window 4: Metal Frame with Thermal Break:Operable, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	107	---	---	0.290	0.600
Window 5: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	81	---	---	0.290	0.460

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
SOUTH					
Exterior Wall 4: Steel-Framed, 16" o.c., [Bldg. Use 1 - Fire Station]	852	19.0	5.0	0.071	0.064
Window 6: Metal Frame with Thermal Break:Operable, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	136	---	---	0.290	0.600
Door 2: Glass (> 50% glazing):Metal Frame, Non-Entrance Door, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	42	---	---	0.290	0.770
Exterior Wall 5: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - Fire Station]	280	---	10.0	0.083	0.123
Door 3: Glass (> 50% glazing):Metal Frame, Non-Entrance Door, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	120	---	---	0.290	0.770
WEST					
Exterior Wall 6: Concrete Block:8", Solid Grouted, Normal Density, Furring: None, [Bldg. Use 1 - Fire Station]	1486	---	10.0	0.083	0.123
Window 7: Metal Frame:Fixed, Perf. Specs.: Product ID Vitro Solarban 90 Clea, SHGC 0.23, [Bldg. Use 1 - Fire Station] (b)	21	---	---	0.290	0.460
Exterior Wall 7: Steel-Framed, 16" o.c., [Bldg. Use 1 - Fire Station]	196	19.0	5.0	0.071	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 15% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Karl A Komatsu, President — Karl A Komatsu — 10/8/2019
Name - Title — Signature — Date

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	REVISIONS	

KOMATSU ARCHITECTURE

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MANSFIELD FIRE STATION NO. 5

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COMCHECK

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LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. GAS LINE
- EX. WATER LINE
- EX. SEWER LINE
- EX. STORM DRAIN
- EX. FIBER OPTIC
- EX. BUILDING
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- EX. CONCRETE PAVEMENT
- EX. FLEX BASE

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

NATIONAL PARKWAY
(90' RIGHT-OF-WAY)

PERMANENT UTILITY EASEMENT
INST# D207216044
D.R.T.C.T.

PERMANENT UTILITY EASEMENT
INST# D213298200
D.R.T.C.T.

REMAINDER OF TRACT 2
TEXAR OAKDEN HEIGHTS, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.

LOT 2

LOT 3

2.624 ACRES,
114,284 SQUARE FEET

24.0' FIRE LANE

24.0' FIRE LANE

25.0'

25.0'

56.0'

R27.5'

R11.5'

R19.5'

R1.5'

R24.5'

R9.5'

84 BC/ME, 131 SW, 132 SW, 66 BC/ME, 65 BC/ME, 64 BC/ME, 133 SW, 134 SW, 136 SW, 135 SW, 77 BC, 67 BC, 71 BC, 72 BC, 76 BC, 63 BC, 70 BC, 73 BC, 68 BC, 69 BC, 74 BC, 75 BC, 62 BC, 61 BC, 60 BC, 102 SW, 28 BC, 27 BC, 58 BC, 59 BC, 103 FLAGPOLE, 29 BC, 26 BC, 57 BC, 56 BC, 25 BC, 3 BLDG, 5 BLDG, 6 BLDG, 1 BLDG, 2 BLDG, 4 BLDG, 7 BLDG, 8 BLDG, 9 BLDG, 10 BLDG, 11 BLDG, 13 BLDG, 14 BLDG, 101 SW, 100 SW, 12 BLDG, 15 BLDG, 16 BLDG, 17 BLDG, 18 BLDG, 20 BLDG, 19 BLDG, 21 BLDG, 91 SW, 23 BLDG, 22 BLDG, 24 BLDG, 87 PORCH, 34 BC, 88 PORCH, 35 BC, 85 PORCH, 96 SW, 97 SW, 86 PORCH, 78 BC, 30 BC, 90 PORCH, 89 PORCH, 33 BC, 92 SW, 93 SW, 104 GENERATOR, 105 GENERATOR, 94 SW, 95 SW, 98 SW, 99 SW, 41 BC, 36 BC, 40 BC, 106 GENERATOR, 107 GENERATOR, 37 BC, 39 BC, 42 BC, 43 BC, 38 BC, 44 BC, 80 BC, 79 BC, 32 BC, 31 BC, 54 BC, 53 BC, 52 BC, 51 BC, 50 BC, 45 BC, 46 BC, 47 BC, 49 BC, 48 BC

SEE SHEET C5.0 – WASTEWATER PLAN

SEE SHEET C6.0 – WATER PLAN

SEE SHEET C4.2 – STORM DRAIN LINE B

SEE SHEET C4.3 – STORM DRAIN LINE C

SEE SHEET C4.1 – STORM DRAIN LINE A

G.C. TO INSTALL 3-6" PVC CONDUITS AND PULLWIRE BENEATH ROADWAY AND EXTEND 5' BEYOND PAVEMENT

G.C. TO INSTALL 3-6" PVC CONDUITS AND PULLWIRE BENEATH ROADWAY AND EXTEND 5' BEYOND PAVEMENT

G.C. TO INSTALL 3-6" PVC CONDUITS AND PULLWIRE BENEATH ROADWAY AND EXTEND 5' BEYOND PAVEMENT

FUTURE DRIVE TO BE INSTALLED BY HOLLAND ROAD CONTRACTOR

PROP. ELECTRICAL EASEMENT

PROP. ELECTRICAL EASEMENT

1/2" IRON ROD FOUND (MILLER)

1/2" IRON ROD FOUND (BEASLEY)

1/2" IRON ROD FOUND (MOAK)

48" RCP FL=554.30

"Y" INLET

ETRAN

CATV VAULT

INLET
BOTTOM
BC=552.81

LOAK 3" 6"

SIGN STOP

SIGN SPEED 40

SIGN TRAFFIC

SIGN BIKE

SIGN INTERSECTION

WATER VALVE
TOP=561.82
INVOUT=558.42

WATER VALVE
TOP=560.34
INVOUT=557.19

WATER VALVE
TOP=560.44
TOP SILT=557.34

WATER VALVE
TOP=560.39
INVOUT=557.62

UE VAULT

CULVERT
FL=560.4

MKR UTFO

PP OE N-S

GUY

EX-W, EX-SS, EX-SD, EX-FO, EX-GAS, EX-UE, EX-COMM, EX-OHE

24' RCP

SS MH

No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400
JD ENGINEERING

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

COORDINATE CONTROL PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C1.0

20 0 20 40
GRAPHIC SCALE IN FEET

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	NORTHING	EASTING
1	BLDG	6888139.31	2410359.26
2	BLDG	6888139.31	2410380.60
3	BLDG	6888142.31	2410380.60
4	BLDG	6888142.31	2410402.26
5	BLDG	6888145.65	2410402.26
6	BLDG	6888145.65	2410444.26
7	BLDG	6888142.31	2410444.26
8	BLDG	6888142.31	2410465.93
9	BLDG	6888140.31	2410465.93
10	BLDG	6888140.31	2410479.93
11	BLDG	6888132.65	2410479.93
12	BLDG	6888132.65	2410509.26
13	BLDG	6888146.98	2410509.26
14	BLDG	6888146.98	2410540.60
15	BLDG	6888132.65	2410540.60
16	BLDG	6888132.65	2410545.59
17	BLDG	6888100.98	2410545.59
18	BLDG	6888100.98	2410538.93
19	BLDG	6888074.65	2410538.93
20	BLDG	6888074.65	2410522.24
21	BLDG	6888068.98	2410522.26
22	BLDG	6888068.98	2410380.61
23	BLDG	6888072.07	2410380.60
24	BLDG	6888072.07	2410359.26
25	BC	6888142.31	2410387.76
26	BC	6888153.41	2410387.76
27	BC	6888172.91	2410368.26
28	BC	6888172.91	2410358.07
29	BC	6888145.41	2410330.57
30	BC	6888053.68	2410330.57
31	BC	6888026.18	2410358.07
32	BC	6888026.18	2410363.26
33	BC	6888050.68	2410387.76
34	BC	6888068.98	2410387.76
35	BC	6888063.98	2410462.76
36	BC	6888035.68	2410462.76
37	BC	6888026.18	2410472.26
38	BC	6888026.18	2410487.13
39	BC	6888027.68	2410488.63
40	BC	6888044.18	2410488.63
41	BC	6888044.18	2410552.63
42	BC	6888027.68	2410552.63
43	BC	6888026.18	2410554.13
44	BC	6888026.18	2410558.13
45	BC	6888001.18	2410558.13
46	BC	6888001.18	2410554.13
47	BC	6887999.68	2410552.63
48	BC	6887983.18	2410552.63
49	BC	6887983.18	2410434.63
50	BC	6887999.68	2410434.63
51	BC	6888001.18	2410433.13
52	BC	6888001.19	2410324.33
53	BC	6888001.18	2410312.32
54	BC	6888001.18	2410132.86
56	BC	6888142.31	2410463.76
57	BC	6888156.43	2410463.76
58	BC	6888157.93	2410465.26
59	BC	6888157.93	2410481.76
60	BC	6888185.93	2410481.76
61	BC	6888185.93	2410465.26
62	BC	6888187.43	2410463.76
63	BC	6888209.96	2410463.76
64	BC/ME	6888237.96	2410491.63
65	BC/ME	6888237.32	2410380.14

POINT	DESCRIPTION	NORTHING	EASTING
66	BC/ME	6888237.22	2410358.09
67	BC	6888209.18	2410330.72
68	BC	6888197.91	2410342.22
69	BC	6888197.91	2410349.11
70	BC	6888199.41	2410350.61
71	BC	6888215.91	2410350.61
72	BC	6888215.91	2410387.61
73	BC	6888199.41	2410387.61
74	BC	6888197.91	2410389.11
75	BC	6888197.91	2410396.27
76	BC	6888209.11	2410407.76
77	BC	6888209.37	2410305.57
78	BC	6888053.68	2410305.57
79	BC	6888026.18	2410278.21
80	BC	6888026.18	2410132.65
84	BC/ME	6888236.87	2410277.56
85	PORCH	6888060.31	2410520.93
86	PORCH	6888060.31	2410545.59
87	PORCH	6888066.07	2410360.51
88	PORCH	6888066.07	2410377.18
89	PORCH	6888051.07	2410377.18
90	PORCH	6888051.07	2410360.51
91	SW	6888072.07	2410360.51
92	SW	6888050.40	2410360.51
93	SW	6888050.40	2410387.76
94	SW	6888049.18	2410488.63
95	SW	6888049.18	2410524.58
96	SW	6888060.31	2410524.58
97	SW	6888060.31	2410529.58
98	SW	6888049.18	2410529.58
99	SW	6888049.18	2410558.13
100	SW	6888139.30	2410479.93
101	SW	6888139.30	2410486.76
102	SW	6888185.93	2410486.76
103	FLAGPOLE	6888163.38	2410497.30
104	GENERATOR	6888048.83	2410469.43
105	GENERATOR	6888048.83	2410481.43
106	GENERATOR	6888032.50	2410481.43
107	GENERATOR	6888032.50	2410469.43
131	SW	6888231.46	2410274.43
132	SW	6888226.46	2410274.46
133	SW	6888233.05	2410545.35
134	SW	6888228.05	2410545.38
135	SW	6888226.77	2410570.15
136	SW	6888231.64	2410570.00

No.	Description	Date
	REVISIONS	

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

COORDINATE CONTROL POINT TABLE

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C1.1

PRE-DEVELOPMENT										
Drainage Area	Tc	I1	I5	I100	SQ.FT	Acreage	Coefficient	Q1	Q5	Q100
EX - 1	10.00	4.06	5.74	9.24	124814.11	2.87	0.30	3.49	4.94	7.95
TOTAL						2.87		3.49	4.94	7.95

LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. GAS LINE (EX-GAS)
- EX. WATER LINE (EX-W)
- EX. SEWER LINE (EX-SS)
- EX. STORM DRAIN (EX-SD)
- EX. FIBER OPTIC (EX-FO)
- EX. BUILDING
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- EX. CONCRETE PAVEMENT
- EX. FLEX BASE
- DRAINAGE BOUNDARY
- BASIN AND ACREAGE (E-6 / 8.51 ac.)

TRACT III
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

NATIONAL PARKWAY
(90' RIGHT-OF-WAY)

TRACT I
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

HOLLAND ROAD

HOLLAND ROAD
(50' RIGHT-OF-WAY)

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

E - 1
2.87 ac.

2.624 ACRES,
114,284 SQUARE FEET

REMAINDER OF TRACT 2
TEXTAUR GARDEN HEIGHTS, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.

GARDEN HEIGHTS
PHASE THREE, SECTION 1
INST# D213250013
P.R.T.C.T.

LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.

LOT 1
LOT 2
LOT 3

1/2" IRON ROD FOUND (MILLER)
1/2" IRON ROD FOUND (BEASLEY)
1/2" IRON ROD FOUND (MOAK)
IRF 1/2" BENT
CONCRETE INTERSECTION

GRAPHIC SCALE IN FEET
30 0 30 60

No.	Description	Date
	REVISIONS	

FINAL DESIGN

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400
JD ENGINEERING

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063
X-DAM

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C2.0

POST - DEVELOPMENT										
Drainage Area	Tc	I1	I5	I100	SQ FT	Acreage	Coefficient	Q1	Q5	Q100
P - 1	10.00	4.06	5.74	9.24	6684.81	0.15	1.00	0.62	0.88	1.42
P - 2	10.00	4.06	5.74	9.24	6989.56	0.16	1.00	0.65	0.92	1.48
P - 3	10.00	4.06	5.74	9.24	21800.46	0.50	0.59	1.21	1.71	2.75
P - 4	11.00	3.88	5.54	8.95	39701.78	0.91	0.63	2.24	3.19	5.16
P - 5	12.00	3.72	5.35	8.68	16221.64	0.37	0.36	0.50	0.72	1.18
P - 6	13.00	3.58	5.18	8.43	26762.68	0.61	0.90	1.98	2.86	4.66
P - 7	14.00	3.44	5.01	8.20	6653.17	0.15	0.31	0.16	0.24	0.39
TOTAL						2.87		7.37	10.53	17.05

P - 1 Imp Calcs		
Concrete	0.90	0.00
Building	1.00	6684.81
Grass	0.30	0.00
Composite C		1.00

P - 2 Imp Calcs		
Concrete	0.90	0.00
Building	1.00	6989.56
Grass	0.30	0.00
Composite C		1.00

P - 3 Imp Calcs		
Concrete	0.90	10710.29
Building	1.00	0.00
Grass	0.30	11090.17
Composite C		0.59

P - 4 Imp Calcs		
Concrete	0.90	21998.07
Building	1.00	0.00
Grass	0.30	17703.71
Composite C		0.63

P - 5 Imp Calcs		
Concrete	0.90	1712.11
Building	1.00	0.00
Grass	0.30	14509.53
Composite C		0.36

P - 6 Imp Calcs		
Concrete	0.90	26762.68
Building	1.00	0.00
Grass	0.30	0.00
Composite C		0.90

P - 7 Imp Calcs		
Concrete	0.90	147.12
Building	1.00	0.00
Grass	0.30	6506.05
Composite C		0.31

LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. GAS LINE (EX-GAS)
- EX. WATER LINE (EX-W)
- EX. SEWER LINE (EX-SS)
- EX. STORM DRAIN (EX-SD)
- EX. FIBER OPTIC (EX-FO)
- EX. BUILDING
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- EX. CONCRETE PAVEMENT
- EX. FLEX BASE
- DRAINAGE BOUNDARY
- BASIN AND ACREAGE — E-6 / 8.51 ac.

DRAINAGE COEFFICIENT NOTE:
DRAINAGE BASIN P–6 WAS GIVEN A COEFFICIENT OF .9 BASED ON A CITY OF MANSFIELD PERMIT COMMENT

TRACT III
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

NATIONAL PARKWAY
(90' RIGHT–OF–WAY)

DRAINAGE AREA P–6 DRAINS TO A CULVERT UNDER NATIONAL PARKWAY

P - 6 0.61 ac.
P - 3 0.50 ac.
P - 5 0.37 ac.
P - 2 0.16 ac.
P - 1 0.15 ac.
P - 4 0.91 ac.
P - 7 0.15 ac.

STORM DRAIN LINE B SEE SHEET C4.2
STORM DRAIN LINE C SEE SHEET C4.3
STORM DRAIN LINE A SEE SHEET C4.1

TRACT I
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

2.624 ACRES,
114,284 SQUARE FEET

REMAINDER OF TRACT 2
TEXTAUR GARDEN HEIGHTS, LLP,
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.

GARDEN HEIGHTS
PHASE THREE, SECTION 1
INST# D213250013
P.R.T.C.T.

LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.

HOLLAND ROAD
(50' RIGHT–OF–WAY)

HOLLAND ROAD

30 0 30 60
GRAPHIC SCALE IN FEET

No.	Description	Date
	REVISIONS	

FINAL DESIGN

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

JD ENGINEERING

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063
P-DAM

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C3.0

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

NATIONAL PARKWAY
(90' RIGHT-OF-WAY)

SIGN SPEED 40

SIGN TRAFFIC

SIGN BIKE

PERMANENT UTILITY EASEMENT
INST# D207216244
D.R.T.C.T.

PERMANENT UTILITY EASEMENT
INST# D213125824
D.R.T.C.T.

!!!CAUTION!!!
APPROXIMATE LOCATION OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION WHEN IN THIS AREA.

WATER VALVE
TOP=560.33
INVERT=557.09

WATER VALVE
TOP=560.64
TOP SILT=557.35

WATER VALVE
TOP=560.39
INVERT=557.65

EX-55 EX-W EX-6" GAS EX-UE EX-COMM EX-GAS

CATV VAULT

IRF 1/2" MILLER
ETRAN

LOAK 3"=6"

LOT 1

LOT 2

LOT 3

REMAINDER OF TRACT 2
TEXTAUR GARDEN HEIGHTS, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.

REMAINDER OF TRACT 2
TEXTAUR GARDEN HEIGHTS, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.

STORM DRAIN LINE B SEE SHEET C4.2

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

SEE MEP FOR ROOF DRAIN CONNECTIONS (TYP.)

PROP. ELECTRICAL EASEMENT

PROP. ELECTRICAL EASEMENT

2.624 ACRES,
114,284 SQUARE FEET

STORM DRAIN LINE C SEE SHEET C4.3

STORM DRAIN LINE B SEE SHEET C4.2

1/2" IRON ROD FOUND (MILLER)

1/2" IRON ROD FOUND (BEASLEY)

1/2" IRON ROD FOUND (MOAK)

1/2" IRON ROD FOUND (BEASLEY)

1/2" IRON ROD FOUND (MILLER)

STORM DRAIN LINE A SEE SHEET C4.1

GARDEN HEIGHTS
PHASE THREE, SECTION 1
INST# D213250013
P.R.T.C.T.

LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.

LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. GAS LINE — EX-GAS
- EX. WATER LINE — EX-W
- EX. SEWER LINE — EX-SS
- EX. STORM DRAIN — EX-SD
- EX. FIBER OPTIC — EX-FO
- EX. BUILDING
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- PROP. STORM CENTERLINE
- PROP. STORM DRAIN

No.	Description	Date
	REVISIONS	

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

JD ENGINEERING

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

STORM DRAIN PLAN OVERALL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C4.0

20 0 20 40
GRAPHIC SCALE IN FEET

!!!CAUTION!!!
APPROXIMATE LOCATION OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION WHEN IN THIS AREA.

GARDEN HEIGHTS
PHASE THREE, SECTION 1
INST# D213250013
P.R.T.C.T.

LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.

LEGEND:

PROPERTY BOUNDARY SUBJECT	
PROPERTY BOUNDARY ADJOINER	
EX. FENCE	
EX. GAS LINE	EX-GAS
EX. WATER LINE	EX-W
EX. SEWER LINE	EX-SS
EX. STORM DRAIN	EX-SD
EX. FIBER OPTIC	EX-FO
EX. BUILDING	
EX. BACK OF CURB	
EX. FACE OF CURB	
EX. GUTTER	
PROP. STORM CENTERLINE	
PROP. STORM DRAIN	

23 LF 21" @ 1.00%
118 LF 15" @ 1.00%
0+00
1+00
1+41

STA 0+00.00 ~ STORM DRAIN LINE A
CONNECT TO EXISTING Y INLET
℄ 21" IN = 554.30 (W)
N 6887981.18
E 2410578.18

STA 0+22.59 ~ STORM DRAIN LINE A =
STA 0+00.00 ~ STORM DRAIN LINE B
CONST STORMCEPTOR STC 7200
OR APPROVED EQUAL
N 6887981.18
E 2410555.59

STA 1+40.56 ~ STORM DRAIN LINE A
CONST TXDOT PRECAST 5' CURB
INLET OR APPROVED EQUAL
N 6887981.18
E 2410437.63

5/8" IRON ROD FOUND (BEASLEY)
5/8" IRON ROD FOUND (MOAK)

2.624 ACRES,
114,284 SQUARE FEET

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

PROP. ELECTRICAL EASEMENT
PROP. ELECTRICAL EASEMENT

20 0 20 40
GRAPHIC SCALE IN FEET

STORM DRAIN LINE A

575 570 565 560 555 550 545

STA 0+00.00 ~ STORM DRAIN LINE A
CONNECT TO EXISTING Y INLET
℄ 21" IN = 554.30 (W)

STA 0+22.59 ~ STORM DRAIN LINE A =
STA 0+00.00 ~ STORM DRAIN LINE B
CONST STORMCEPTOR STC 7200
OR APPROVED EQUAL
RIM = 560.39
℄ 21" OUT = 554.53 (E)
℄ 15" IN = 554.53 (W)
℄ 18" IN = 554.53 (N)
FL=554.80

FL=555.30

STA 1+40.56 ~ STORM DRAIN LINE A
CONST TXDOT PRECAST 5' CURB
INLET OR APPROVED EQUAL
RIM = 559.57
℄ 15" OUT = 555.71 (E)

PG
HGL
EG

23 LF 21" HDPE @ 1.00%
118 LF 15" HDPE @ 1.00%

−0+50 0+00 0+50 1+00 1+50 2+00

No.	Description	Date
	REVISIONS	

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

JAMES E. DeOTTE
65840
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

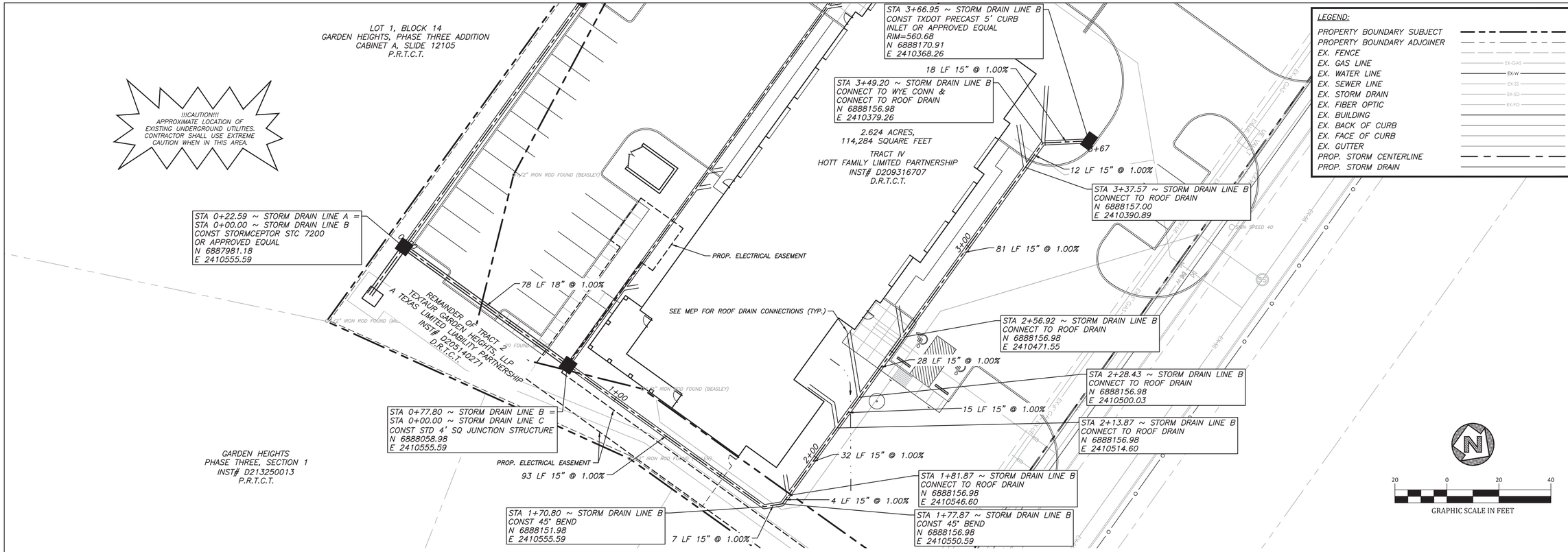
Date: 11/19/2019

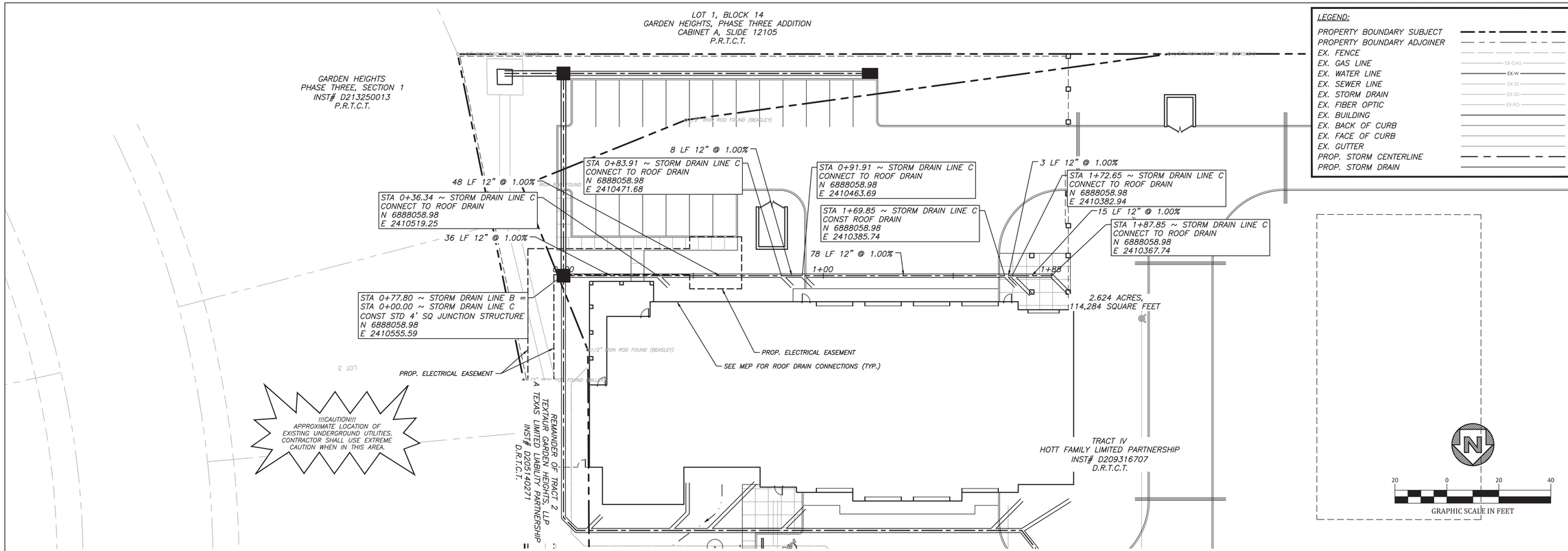
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

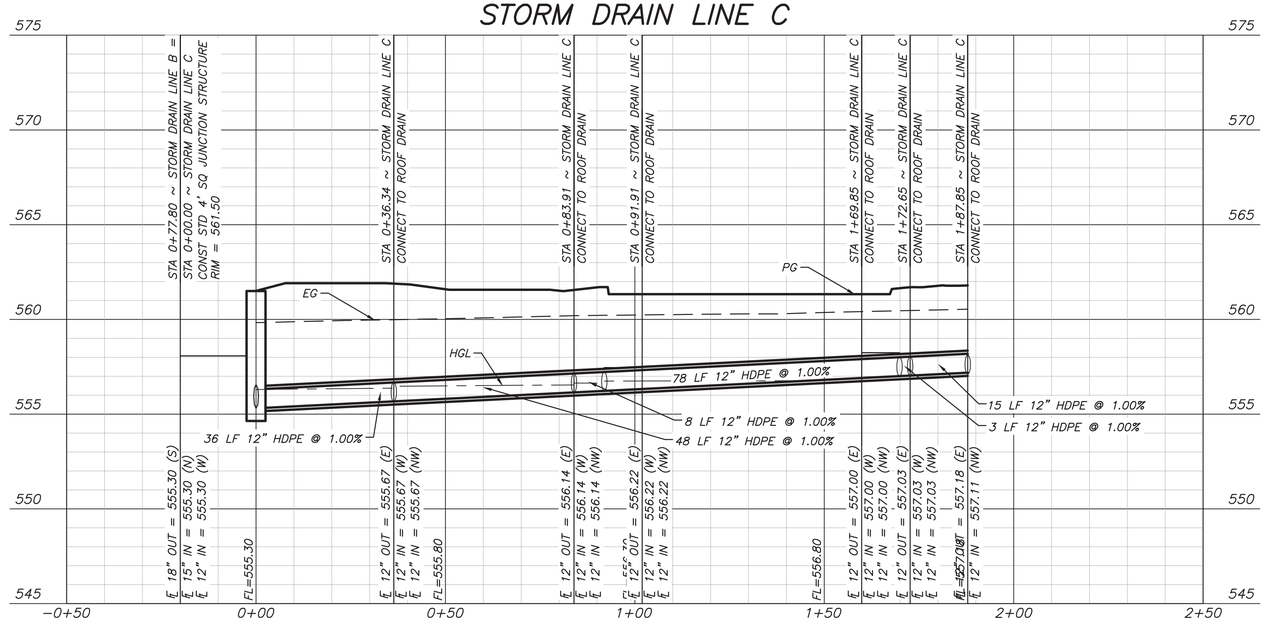
STORM DRAIN LINE A

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C4.1


LOT 1, BLOCK 14
GARDEN HEIGHTS, PHASE THREE ADDITION
CABINET A, SLIDE 12105
P.R.T.C.T.
!!!CAUTION!!!
APPROXIMATE LOCATION OF
EXISTING UNDERGROUND UTILITIES.
CONTRACTOR SHALL USE EXTREME
CAUTION WHEN IN THIS AREA.
STA 0+22.59 ~ STORM DRAIN LINE A =
STA 0+00.00 ~ STORM DRAIN LINE B
CONST STORMCEPTOR STC 7200
OR APPROVED EQUAL
N 6887981.18
E 2410555.59
78 LF 18" @ 1.00%
REMAINDER OF TRACT 2
TEXTAUR GARDEN HEIGHTS, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D205140271
D.R.T.C.T.
PROP. ELECTRICAL EASEMENT
SEE MEP FOR ROOF DRAIN CONNECTIONS (TYP.)
STA 0+77.80 ~ STORM DRAIN LINE B =
STA 0+00.00 ~ STORM DRAIN LINE C
CONST STD 4' SQ JUNCTION STRUCTURE
N 6888058.98
E 2410555.59
93 LF 15" @ 1.00%
PROP. ELECTRICAL EASEMENT
GARDEN HEIGHTS
PHASE THREE, SECTION 1
INST# D213250013
P.R.T.C.T.
STA 1+70.80 ~ STORM DRAIN LINE B
CONST 45° BEND
N 6888151.98
E 2410555.59
7 LF 15" @ 1.00%
4 LF 15" @ 1.00%
STA 1+77.87 ~ STORM DRAIN LINE B
CONST 45° BEND
N 6888156.98
E 2410550.59
32 LF 15" @ 1.00%
STA 1+81.87 ~ STORM DRAIN LINE B
CONNECT TO ROOF DRAIN
N 6888156.98
E 2410546.60
15 LF 15" @ 1.00%
STA 2+13.87 ~ STORM DRAIN LINE B
CONNECT TO ROOF DRAIN
N 6888156.98
E 2410514.60
28 LF 15" @ 1.00%
STA 2+28.43 ~ STORM DRAIN LINE B
CONNECT TO ROOF DRAIN
N 6888156.98
E 2410500.03
81 LF 15" @ 1.00%
STA 2+56.92 ~ STORM DRAIN LINE B
CONNECT TO ROOF DRAIN
N 6888157.00
E 2410471.55
12 LF 15" @ 1.00%
STA 3+37.57 ~ STORM DRAIN LINE B
CONNECT TO ROOF DRAIN
N 6888157.00
E 2410390.89
18 LF 15" @ 1.00%
STA 3+49.20 ~ STORM DRAIN LINE B
CONNECT TO WYE CONN &
CONNECT TO ROOF DRAIN
N 6888156.98
E 2410379.26
STA 3+66.95 ~ STORM DRAIN LINE B
CONST TXDOT PRECAST 5' CURB
INLET OR APPROVED EQUAL
RIM=560.68
N 6888170.91
E 2410368.26
2.624 ACRES,
114,284 SQUARE FEET
TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.
1/2" IRON ROD FOUND (BEASLEY)
1/2" IRON ROD FOUND (MA...
1/2" IRON ROD FOUND (BEASLEY)
1/2" IRON ROD FOUND (BEASLEY)
1/2" IRON ROD FOUND (BEASLEY)



STORM DRAIN LINE C



No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

STORM DRAIN LINE C

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C4.3

Storm Drain
Hydraulic Computation Table

From	To	Pipe Length	Drainage Area			Runoff "C"	Incr. CA	Total CA	Time of Concentration			5-Year Intensity	100-Year Intensity	Q-5 Runoff	Q-100 Runoff	Inlet Bypass	Q pipe	C Pipe	Pipe Size Dia.	n	Sf	HGL		Head Loss Calculations							Design HGL	Invert Elevation		Slope (ft./ft.)	T/C Elev	HGL above Ground	Comments
			Incremental		Total				Inlet	Travel	Total											D/S	U/S	V1 (in)	V2 (out)	V12/2g	V22/2g	Kj	KjV12/2g	Hj		DS	US				
		feet	No.	Area	Area				min.	min.	min.	in/hr	in/hr	cfs	cfs	cfs	cfs		in		ft/ft	Elev.	Elev.	ft/sec	ft/sec	ft	ft		ft	ft	Elev.	ft	ft		ft		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	**38**
Proposed Storm Drain Line A																																					
0+23	1+41	117.97	P-4	0.91	0.91	0.63	0.57	0.57	10	0.46	10.46	5.73	9.13	3.29	5.24	0.00	5.24	6.46	15	0.013	0.00659	558.42	559.20	0.00	4.27	0.00	0.28	1.25	0.000	0.35	559.56	554.53	555.71	0.01000	559.57	-0.01	Inlet at Start
0+00	0+23	22.59			0.91		0.00	0.57		0.17	10.63	5.69	9.08	3.27	5.22	0.00	5.22	15.99	21	0.013	0.00108	558.30	558.32	4.27	2.17	0.28	0.07	1.3	0.369	0.10	558.42	554.30	554.53	0.01018	560.39	-1.97	Connect to Stormceptor
Proposed Storm Drain Line B																																					
3+49	3+67	17.75	P-3	0.50	0.50	0.59	0.30	0.30	10	0.13	10.13	5.80	9.23	1.71	2.73	0.00	2.73	6.51	15	0.013	0.00178	560.23	560.26	0.00	2.22	0.00	0.08	1.25	0.000	0.10	560.36	558.02	558.20	0.01014	560.68	-0.32	Inlet at Start
3+29	3+49	20.16	Fraction of P-2	0.02	0.52	1.00	0.02	0.32		0.14	10.27	5.77	9.19	1.84	2.92	0.00	2.92	4.98	15	0.013	0.00205	560.08	560.13	2.22	2.38	0.08	0.09	0.75	0.057	0.10	560.23	557.90	558.02	0.00595	561.44	-1.21	Connect to Roof Drain
2+57	3+29	72.12	Fraction of P-2	0.02	0.55	1.00	0.02	0.34		0.48	10.75	5.67	9.05	1.93	3.09	0.00	3.09	6.80	15	0.013	0.00228	559.82	559.98	2.38	2.52	0.09	0.10	0.75	0.066	0.10	560.08	557.10	557.90	0.01109	561.35	-1.27	Connect to Roof Drain
2+28	2+57	28.49	Fraction of P-2	0.02	0.57	1.00	0.02	0.36		0.18	10.93	5.63	9.00	2.05	3.28	0.00	3.28	6.52	15	0.013	0.00257	559.65	559.72	2.52	2.67	0.10	0.11	0.75	0.074	0.10	559.82	556.81	557.10	0.01018	561.80	-1.98	Connect to Roof Drain
2+14	2+28	14.56	Fraction of P-2	0.02	0.59	1.00	0.02	0.39		0.09	11.02	5.62	8.97	2.17	3.47	0.00	3.47	6.56	15	0.013	0.00289	559.50	559.55	2.67	2.83	0.11	0.12	0.75	0.083	0.10	559.65	556.66	556.81	0.01030	561.87	-2.22	Connect to Roof Drain
1+82	2+14	32.00	Fraction of P-2	0.02	0.62	1.00	0.02	0.41		0.18	11.19	5.58	8.92	2.29	3.66	0.00	3.66	6.46	15	0.013	0.00321	559.30	559.40	2.83	2.98	0.12	0.14	0.75	0.093	0.10	559.50	556.34	556.66	0.01000	561.42	-1.92	Connect to Roof Drain
1+78	1+82	4.00	Fraction of P-2	0.02	0.64	1.00	0.02	0.43		0.02	11.22	5.58	8.92	2.41	3.86	0.00	3.86	6.46	15	0.013	0.00357	559.17	559.18	2.98	3.14	0.14	0.15	0.75	0.103	0.12	559.30	556.30	556.34	0.01000	561.39	-2.09	Connect to Roof Drain
1+71	1+78	7.07			0.64		0.00	0.43		0.04	11.25	5.57	8.91	2.41	3.85	0.00	3.85	6.43	15	0.013	0.00356	559.04	559.07	3.14	3.14	0.15	0.15	0.35	0.054	0.10	559.17	556.23	556.30	0.00990	561.21	-2.04	45° Bend
0+78	1+71	93.00			0.64		0.00	0.43		0.50	11.75	5.48	8.77	2.37	3.80	0.00	3.80	6.46	15	0.013	0.00345	558.62	558.94	3.14	3.09	0.15	0.15	0.35	0.054	0.10	559.04	555.30	556.23	0.01000	561.21	-2.17	45° Bend
0+00	0+78	77.80			0.64		0.00	0.43		0.61	12.37	5.36	8.61	2.32	3.73	0.00	3.73	10.45	18	0.013	0.00126	558.42	558.52	3.09	2.11	0.15	0.07	0.75	0.111	0.10	558.62	554.53	555.30	0.00990	561.50	-2.88	Connect to Storm Drain Line C
Proposed Storm Drain Line C																																					
1+73	1+88	15.20	Fraction of P-1	0.03	0.03	1.00	0.03	0.03		0.56	0.56	9.14	13.84	0.23	0.35	0.00	0.35	2.58	12	0.013	9.9E-05	556.97	556.97	0.00	0.45	0.00	0.00	0.75	0.000	0.10	557.07	557.03	557.11	0.00526	561.80	-4.73	Connect to Roof Drain
1+70	1+73	2.80	Fraction of P-1	0.03	0.03	1.00	0.03	0.03		0.10	0.10	9.42	14.21	0.24	0.36	0.00	0.36	3.69	12	0.013	0.0001	556.87	556.87	0.45	0.46	0.00	0.00	0.75	0.002	0.10	556.97	557.00	557.03	0.01071	561.70	-4.73	Connect to Roof Drain
0+92	1+70	77.94	Fraction of P-1	0.03	0.05	1.00	0.03	0.05		1.53	1.63	8.56	13.07	0.44	0.67	0.00	0.67	3.56	12	0.013	0.00035	556.74	556.77	0.46	0.85	0.00	0.01	0.75	0.002	0.10	556.87	556.22	557.00	0.01001	561.64	-4.77	Connect to Roof Drain
0+84	0+92	8.00	Fraction of P-1	0.03	0.08	1.00	0.03	0.08		0.10	1.73	8.51	13.00	0.65	1.00	0.00	1.00	3.56	12	0.013	0.00078	556.64	556.64	0.85	1.27	0.01	0.03	0.75	0.008	0.10	556.74	556.14	556.22	0.01000	561.61	-4.87	Connect to Roof Drain
0+36	0+84	47.57	Fraction of P-1	0.03	0.10	1.00	0.03	0.10		0.48	2.21	8.28	12.69	0.85	1.30	0.00	1.30	3.54	12	0.013	0.00133	556.47	556.54	1.27	1.65	0.03	0.04	0.75	0.019	0.10	556.64	555.67	556.14	0.00988	561.55	-4.91	Connect to Roof Drain
0+00	0+36	36.34	Fraction of P-1	0.03	0.13	1.00	0.03	0.13		0.30	2.51	8.14	12.50	1.04	1.60	0.00	1.60	3.60	12	0.013	0.00201	556.30	556.37	1.65	2.04	0.04	0.06	0.75	0.032	0.10	556.47	555.30	555.67	0.01018	561.93	-5.46	Connect to Roof Drain

No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

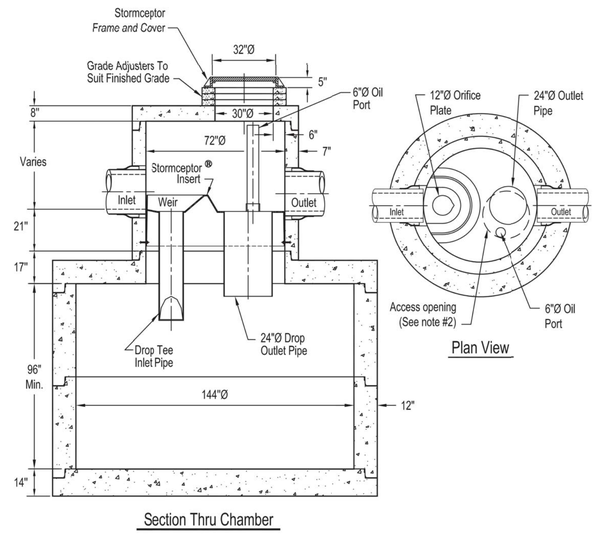
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

STORM DRAIN CALCS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C4.4

STC 7200 Precast Concrete Stormceptor ®
(7200 U.S. Gallon Capacity)



Notes:

1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

WATER QUALITY VOLUME CALCS		
WQv	0.02	acre-feet
Rv	0.05	
I	0.39	%
A	2.87	Acres
Imp Area	48211.77	Sq Ft
Total Area	124814.11	Sq Ft
Required Storage Volume	834.33	Cu Ft
STC 7200		
Total Storage Volume	7420.00	U.S. Gal
Total Storage Volume	991.91	Cu Ft

No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

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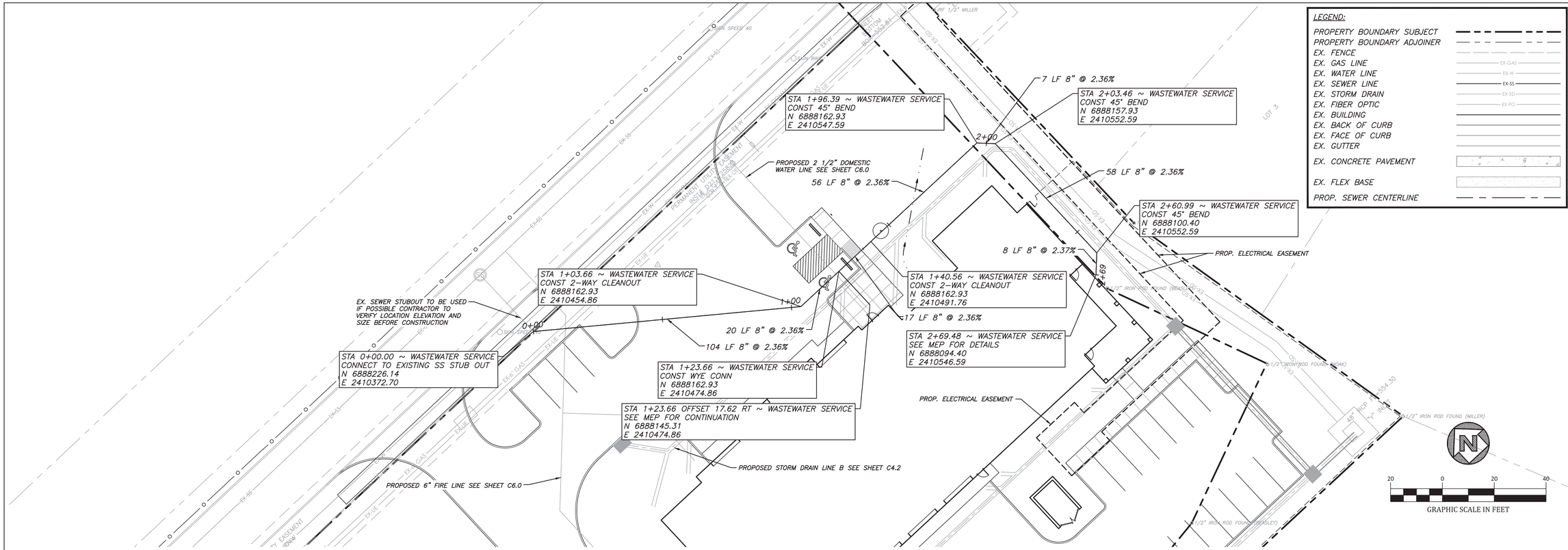
Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

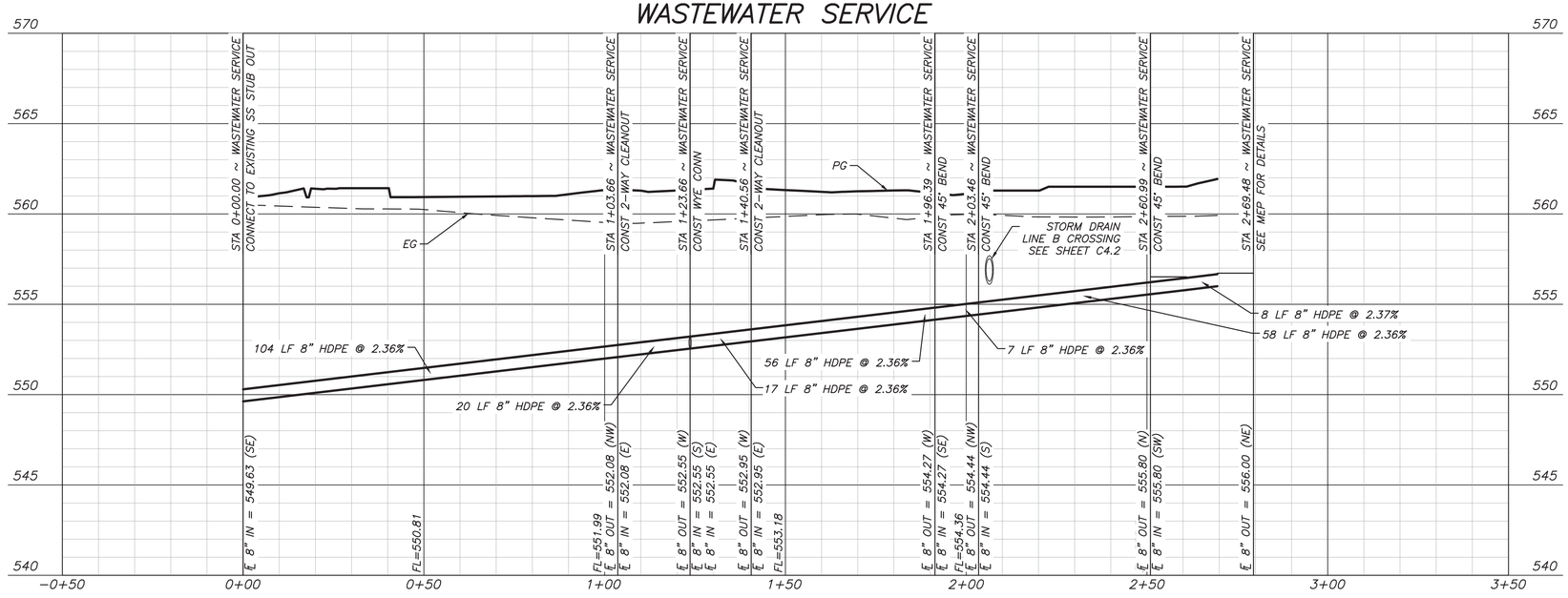
4444 National Parkway
Mansfield, Texas 76063

STC 7200 STORMCEPTOR DETAIL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C4.5



WASTEWATER SERVICE



No.	Description	Date
	REVISIONS	

James DeDitte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400
JD ENGINEERING

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeDITTE
65840
REGISTERED PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

WASTEWATER PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C5.0

LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. GAS LINE — EX-GAS
- EX. WATER LINE — EX-W
- EX. SEWER LINE — EX-SS
- EX. STORM DRAIN — EX-SD
- EX. FIBER OPTIC — EX-FO
- EX. BUILDING
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- EX. CONCRETE PAVEMENT
- EX. FLEX BASE
- PROP. WATER CENTERLINE

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

NATIONAL PARKWAY
(90' RIGHT-OF-WAY)

EX. WATER STUBOUT TO BE USED IF POSSIBLE
CONTRACTOR TO VERIFY LOCATION ELEVATION
AND SIZE BEFORE CONSTRUCTION

EXISTING 12" PVC WATER LINE

PERMANENT UTILITY EASEMENT
INST# D207216744
D.R.T.C.T.

WATER VALVE
TOP=561.82
INVT=558.42

STA 0+00.00 ~ FIRE LINE
CONNECT TO EXISTING
8" WATER LINE
N 6888227.24
E 2410386.07

STA 0+05.00 ~ FIRE LINE
INSTALL:
(1) – 6" 45° HORIZ BEND
N 6888222.24
E 2410386.11

STA 0+42.75 ~ FIRE LINE
INSTALL:
(1) – 6"x6" TEE
N 6888195.37
E 2410359.59

6" FIRE LINE

STA 0+80.51 ~ FIRE LINE
INSTALL:
(1) – 6" 45° HORIZ BEND
N 6888168.49
E 2410333.07

STA 0+42.75 OFFSET 34.92 LT ~ FIRE LINE
INSTALL:
(1) – 6" 45° HORIZ BEND
N 6888170.84
E 2410384.45

STA 1+01.69 OFFSET 51.37 LT ~ FIRE LINE
SEE MEP FOR CONTINUATION
N 6888147.31
E 2410384.44

STA 1+73.57 ~ FIRE LINE
INSTALL:
(1) – 6"x6" ANCHOR TEE
(1) – 6" GATE VALVE W/ BOX
(1) – STD FDC
N 6888075.43
E 2410333.07

STA 1+78.60 ~ FIRE LINE
INSTALL:
(1) – 6"x6" ANCHOR TEE
(1) – 6" GATE VALVE W/ BOX
(1) – STD FIRE HYDRANT ASSEMBLY
N 6888070.41
E 2410333.07

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316707
D.R.T.C.T.

2.624 ACRES,
114,284 SQUARE FEET

STA 0+00.00 ~ DOMESTIC WATER
INSTALL:
(1) – 12"x2" TAPPING SLEEVE
N 6888230.78
E 2410473.24

STA 0+09.33 ~ DOMESTIC WATER
INSTALL:
(1) – 2" METER WITH VALVE & BOX
& BACKFLOW PREVENTION
N 6888221.45
E 2410473.24

2 1/2" DOMESTIC WATER LINE

STA 0+00.00 ~ IRRIGATION
INSTALL:
(1) – 12"x2" TAPPING SLEEVE
N 6888230.82
E 2410483.59

1 1/2" IRRIGATION LINE
TO BE MADE USING 2" PARTS AS PER CITY OF
MANSFIELD REQUIREMENTS SEE SHEET W-1

STA 0+09.36 ~ IRRIGATION
INSTALL:
(1) – 2" METER WITH BACKFLOW
PREVENTION REFER TO LANDSCAPE PLAN
FOR DETAILS AND CONTINUATION
N 6888221.47
E 2410483.63

STA 0+85.47 ~ DOMESTIC WATER
SEE MEP FOR CONTINUATION
N 6888145.31
E 2410473.22

PROPOSED WASTEWATER SEE SHEET C5.0

PROPOSED STORM DRAIN LINE B SEE SHEET C4.2

PROPOSED STORM DRAIN LINE C SEE SHEET C4.3

PROPOSED STORM DRAIN LINE A SEE SHEET C4.1

PROP. ELECTRICAL EASEMENT

PROP. ELECTRICAL EASEMENT

REMAINDER OF LOT 2
TEXAS LAND GARDEN HOMES, LLP
A TEXAS LIMITED LIABILITY PARTNERSHIP
INST# D213245142
D.R.T.C.T.

LOT 2

LOT 3

LOT 1

CATV VAULT

ETRAN

48" RCP IN=554.30
"Y" INLET

1/2" IRON ROD FOUND (MILLER)

1/2" IRON ROD FOUND (BEASLEY)

1/2" IRON ROD FOUND (MOAK)

SIGN INTERSECTION

GRAPHIC SCALE IN FEET
20 0 20 40

No.	Description	Date
	REVISIONS	

FINAL DESIGN

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

JD ENGINEERING

JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063
WATER PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C6.0

NATIONAL PARKWAY
(90' RIGHT-OF-WAY)

CITY OF MANSFIELD
INST# D213125824
D.R.T.C.T.

TRACT IV
HOTT FAMILY LIMITED PARTNERSHIP
INST# D209316701
D.R.T.C.T.

2.624 ACRES,
114,284 SQUARE FEET

LOT 2

LOT 3

REMAINDER OF
TEXAS LIMITED PARTNERSHIP
D.R.T.C.T.

(50' RIGHT-OF-WAY)

GRADING OF ADA SIDEWALK
MAXIMUM RUNNING SLOPE 5%
MAXIMUM CROSS SLOPE 2%

GRADING OF ADA SIDEWALK
MAXIMUM RUNNING SLOPE 5%
MAXIMUM CROSS SLOPE 2%

PROPOSED FIRE LINE
SEE SHEET C6.0

PROPOSED DOMESTIC WATER
LINE SEE SHEET C6.0

WASTEWATER SEE SHEET C5.0

STORM DRAIN SEE SHEET C4.0 – C4.3

PROP. ELECTRICAL EASEMENT

PROP. ELECTRICAL EASEMENT

FP=562.00

LEGEND:

PROPERTY BOUNDARY SUBJECT	
PROPERTY BOUNDARY ADJOINER	
EX. FENCE	
EX. GAS LINE	EX-GAS
EX. WATER LINE	EX-W
EX. SEWER LINE	EX-SS
EX. STORM DRAIN	EX-SD
EX. FIBER OPTIC	EX-FO
EX. BUILDING	
EX. MAJOR CONTOUR	700
EX. MINOR CONTOUR	699
EX. BACK OF CURB	
EX. FACE OF CURB	
EX. GUTTER	
EX. CONCRETE PAVEMENT	
EX. FLEX BASE	
PROP. BUILDING	
PROP. MAJOR CONTOUR	700
PROP. MINOR CONTOUR	699
FINISHED GRADE	FG
GUTTER	GT
TOP OF CURB	TC

No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

JD ENGINEERING

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

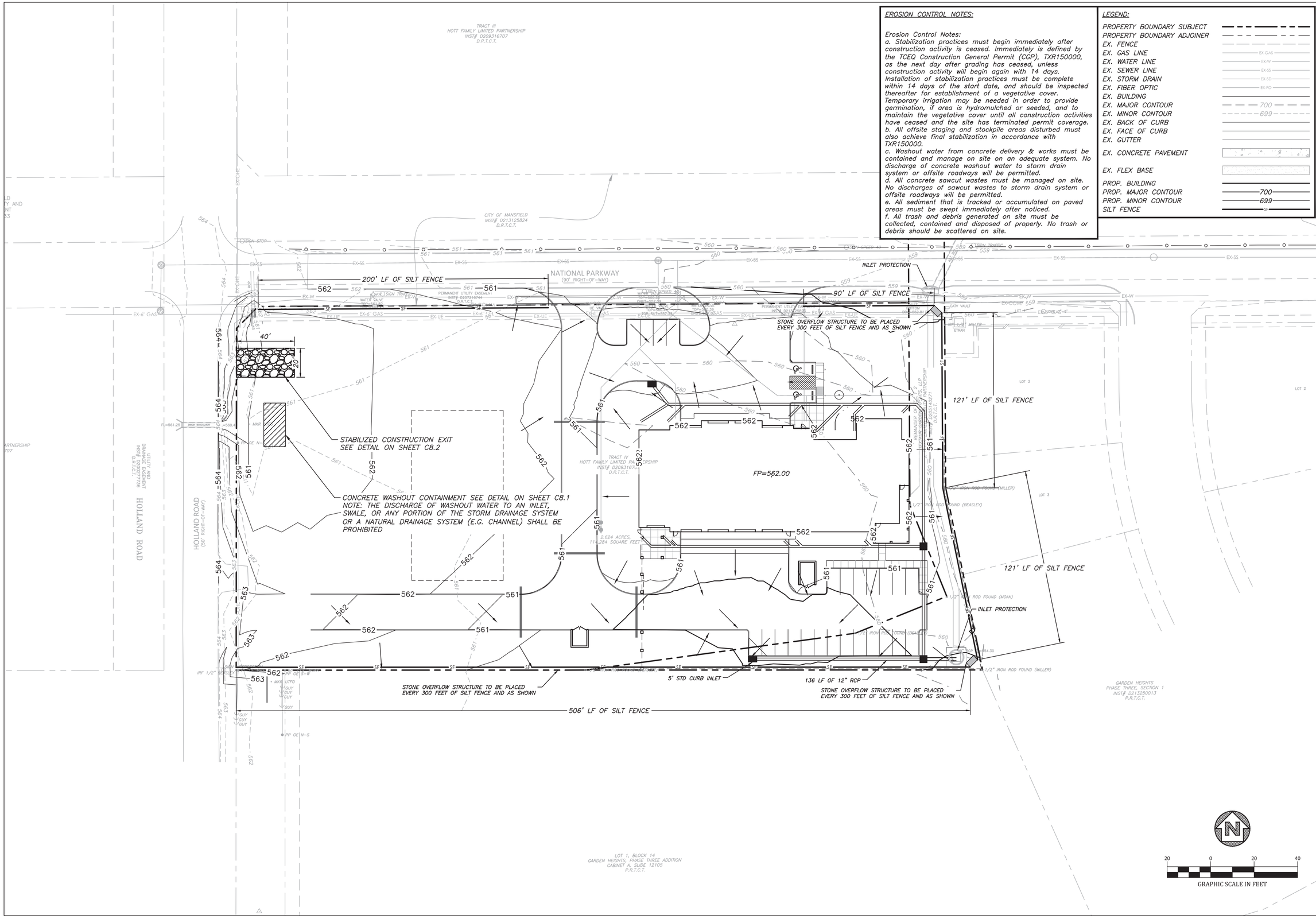
4444 National Parkway
Mansfield, Texas 76063

GRADING PLAN

FINAL DESIGN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C7.0

20 0 20 40
GRAPHIC SCALE IN FEET



No.	Description	Date
	REVISIONS	

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2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
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JD ENGINEERING

FINAL DESIGN

STATE OF TEXAS
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65840
REGISTERED PROFESSIONAL ENGINEER

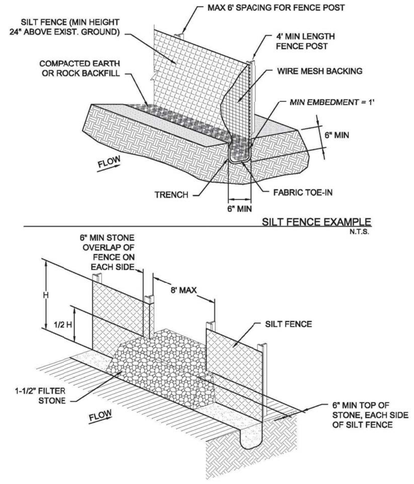
Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

EROSION CONTROL PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C8.0

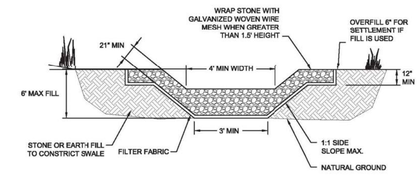


SILT FENCE EXAMPLE
N.T.S.

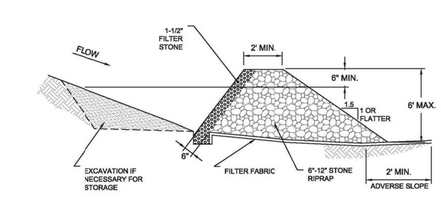
STONE OVERFLOW STRUCTURE EXAMPLE
N.T.S.

NOTES: 1. DESIGN SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE OVERFLOW STRUCTURES SHALL BE INSTALLED. OVERFLOW STRUCTURES ARE REQUIRED AT ALL LOW POINTS AND AT A SPACING OF APPROXIMATELY 300 FT WHERE NO LOW POINT IS APPARENT.
2. DESIGNER SHALL ON THE DRAWINGS THE LOCATIONS WHERE SILT FENCE IS TO BE TURNED UPSLOPE. UPSLOPE LENGTHS SHALL BE A MINIMUM OF 10 FEET.

Figure 3.28 Schematics of Silt Fence



EXCAVATED STONE OUTLET SEDIMENT TRAP VIEW LOOKING UPSTREAM
N.T.S.

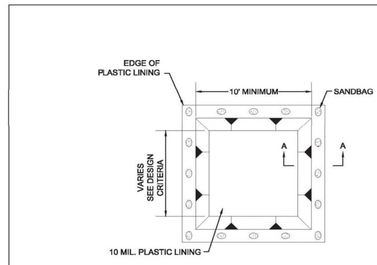


EXCAVATED STONE OUTLET SEDIMENT TRAP SECTION VIEW
N.T.S.

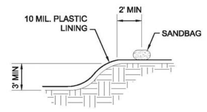
NOTE: ACTUAL DIMENSIONS OF THE SEDIMENT TRAP SHALL BE DESIGNED BASED ON FLOW CONDITIONS AND SITE TOPOGRAPHY. PROVIDE CALCULATIONS THAT DOCUMENT THE FOLLOWING PARAMETER USED TO DESIGN THE TRAP.

- SIZE OF CONTRIBUTING DRAINAGE AREA
- DESIGN STORM VOLUME AND FLOW RATE AT THE TRAP
- HEIGHT, SLOPE, AND LENGTH OF STONE OUTLET
- STORAGE VOLUME
- EXTENT OF GRADING TO PROVIDE THE CONTROLLED OUTLET

Figure 3.30 Schematics of Excavated Stone Outlet Sediment Trap



CONCRETE WASHOUT PLAN VIEW
N.T.S.



CONCRETE WASHOUT SECTION A-A
N.T.S.

NOTE: SANDBAGS MAY BE REPLACED BY A SOIL BERM TO ANCHOR THE PLASTIC LINING.

Figure 4.1 Schematics of Concrete Washout Containment

No.	Description	Date
	REVISIONS	

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED PROFESSIONAL ENGINEER

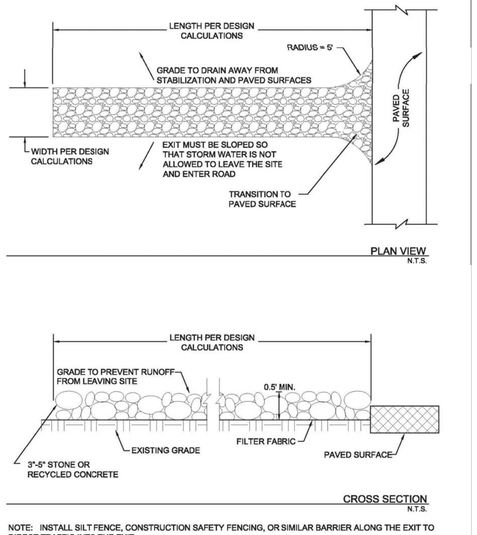
Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

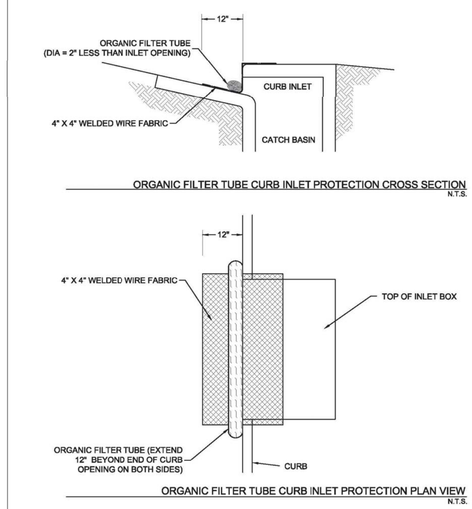
EROSION CONTROL DETAILS (SHEET 1 OF 2)

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C8.1



NOTE: INSTALL SILT FENCE, CONSTRUCTION SAFETY FENCING, OR SIMILAR BARRIER ALONG THE EXIT TO DIRECT TRAFFIC INTO THE EXIT.

Figure 3.29 Schematics of Stabilized Construction Exit



NOTE: THIS CONTROL WILL DECREASE THE CAPACITY OF THE INLET. IT SHALL ONLY BE USED WHEN AN ENGINEER HAS DETERMINED THERE IS ADEQUATE STORAGE OR POSITIVE OVERFLOW.

Figure 3.6 Schematics of Organic Filter Tube Curb Inlet Protection
(Source: Modified from City of Plano BMP SP-4)

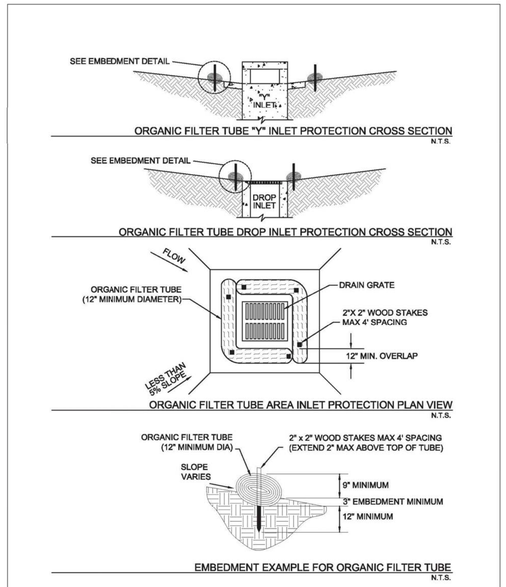


Figure 3.13 Schematics of Organic Filter Tube Area Inlet Protection

No.	Description	Date
	REVISIONS	

James DeOtte Engineering, Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

FINAL DESIGN

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED PROFESSIONAL ENGINEER

Date: 11/19/2019

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

EROSION CONTROL DETAILS (SHEET 2 OF 2)

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C8.2

PAVING NOTES:

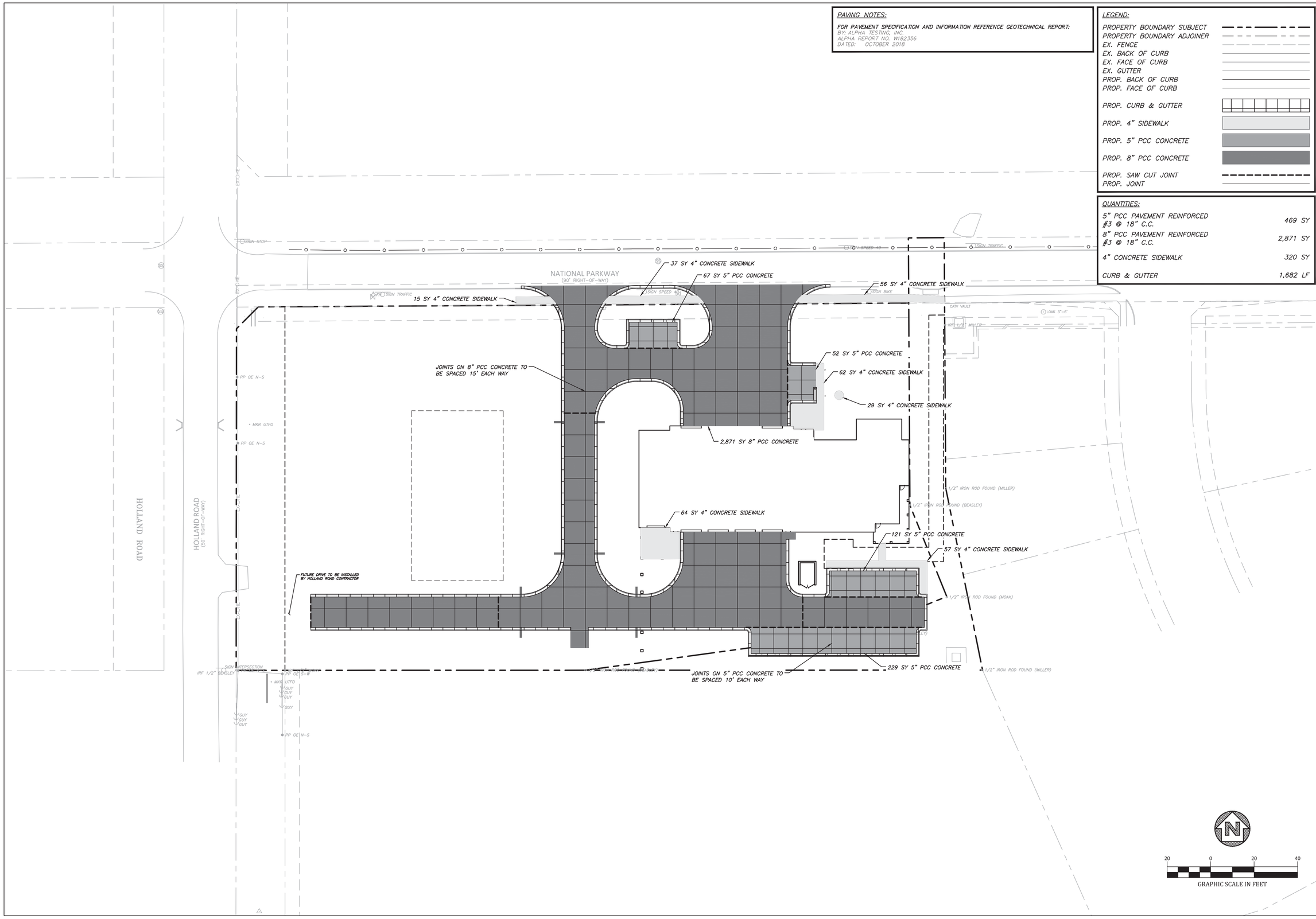
FOR PAVEMENT SPECIFICATION AND INFORMATION REFERENCE GEOTECHNICAL REPORT:
BY: ALPHA TESTING, INC.
ALPHA REPORT NO. W182356
DATED: OCTOBER 2018

LEGEND:

- PROPERTY BOUNDARY SUBJECT
- PROPERTY BOUNDARY ADJOINER
- EX. FENCE
- EX. BACK OF CURB
- EX. FACE OF CURB
- EX. GUTTER
- PROP. BACK OF CURB
- PROP. FACE OF CURB
- PROP. CURB & GUTTER
- PROP. 4" SIDEWALK
- PROP. 5" PCC CONCRETE
- PROP. 8" PCC CONCRETE
- PROP. SAW CUT JOINT
- PROP. JOINT

QUANTITIES:

5" PCC PAVEMENT REINFORCED #3 @ 18" C.C.	469 SY
8" PCC PAVEMENT REINFORCED #3 @ 18" C.C.	2,871 SY
4" CONCRETE SIDEWALK	320 SY
CURB & GUTTER	1,682 LF



20 0 20 40
GRAPHIC SCALE IN FEET

No.	Description	Date
	REVISIONS	

James DeOtte Engineering Inc.
2201 Dottie Lynn Parkway, Suite 119
Fort Worth, Texas 76120
TBPE Firm Reg. No. 8917
TBLS Firm Reg. No. 10101400

JD ENGINEERING

STATE OF TEXAS
JAMES E. DeOTTE
65840
REGISTERED
PROFESSIONAL ENGINEER

Date: 11/19/2019

FINAL DESIGN

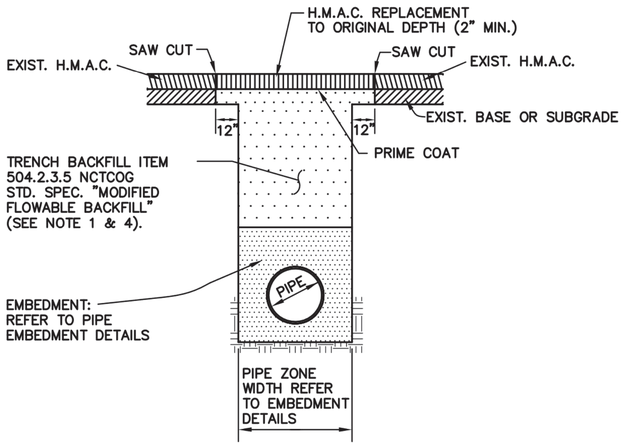
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

PAVING PLAN

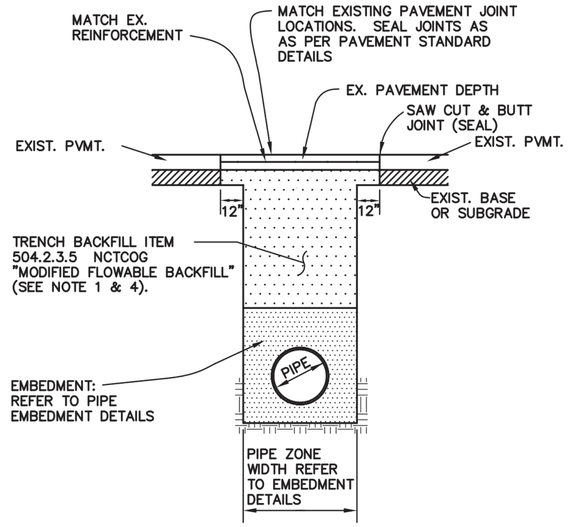
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	C9.0

TRENCH REPAIR AT PAVEMENT DETAILS



TYPICAL SECTION
ASPHALT PAVEMENT REPAIR

N.T.S.

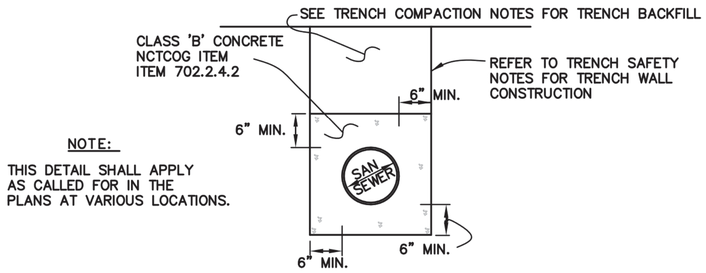


TYPICAL SECTION
CONCRETE PAVEMENT REPAIR

N.T.S.

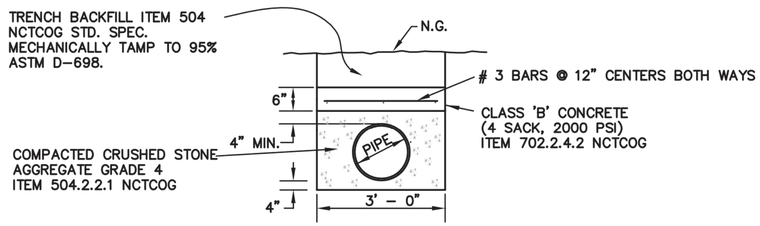
GENERAL NOTES:

1. BACKFILL FOR OPEN CUTS IN EXISTING IMPROVED PAVED ROADWAYS SHALL BE MODIFIED FLOWABLE BACKFILL PER NCTCOG SPEC 504.2.3.5. NATIVE MATERIAL MAY BE PERMITTED IN LOWER PORTION OF DEEP TRENCHES AT INSPECTOR'S DISCRETION.
2. CONCRETE PAVEMENT REPLACEMENT SHALL BE IN A MINIMUM OF ONE HALF PANEL INCREMENTS.
3. REFER TO CITY OF MANSFIELD MATERIAL TESTING POLICIES FOR BACKFILL TESTING PROCEDURES.
4. TRENCH SAFETY: THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY PLAN WHICH SPECIFICALLY ADDRESSES AND IDENTIFIES THE TRENCHES TO BE MADE ON THIS PROJECT AND PROVIDES THE TRENCHING DETAILS TO PROVIDE A SAFE WORK PLACE IN ACCORDANCE WITH STATE LAW AND OSHA REGULATIONS. THE TRENCH SAFETY PLAN SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS WITH EXPERIENCE IN PREPARATION OF TRENCH SAFETY SYSTEMS. THE PLAN SHALL INCLUDE ALL SOILS INVESTIGATION AND TEST DATA USED BY THE ENGINEER IN DEVELOPING THIS PLAN. THE CONTRACTOR SHALL CONDUCT HIS TRENCHING OPERATIONS IN ACCORDANCE WITH THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTION AND ENFORCEMENT OF SUCH PLAN.



CONCRETE ENCASEMENT

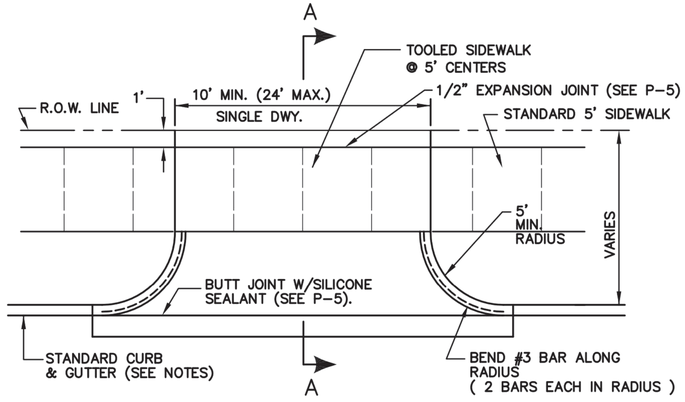
N.T.S.



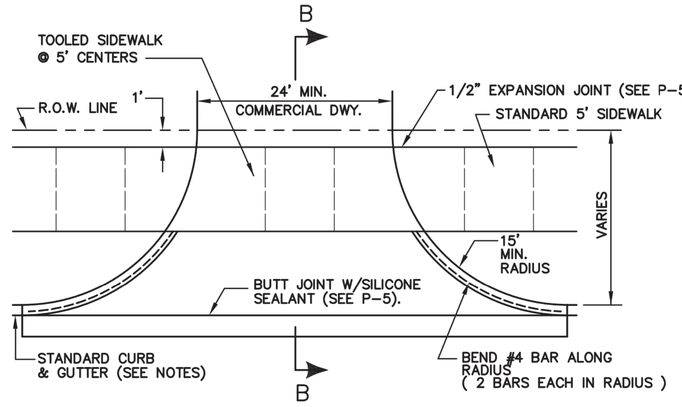
PIPE CONCRETE CAP DETAIL

N.T.S.

TRENCH DETAILS		
CITY OF MANSFIELD STANDARD CONSTRUCTION DETAILS		
MISCELLANEOUS	DATE: NOV. 2014	SHEET NO. M-1



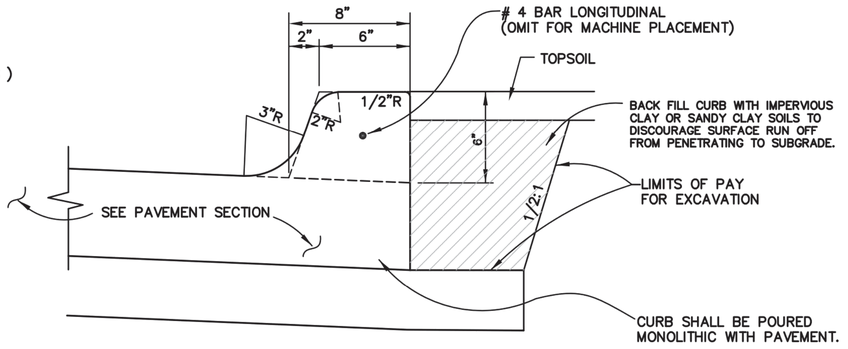
PLAN VIEW



PLAN VIEW

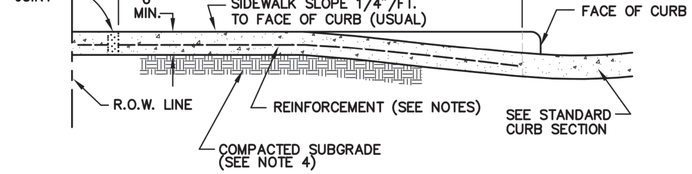
GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS, METHODS AND PLACEMENT NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, OCTOBER 2004 EDITION UNLESS SUPERSEDED BY CITY OF MANSFIELD STANDARD SPECIFICATIONS OR MATERIAL TESTING POLICIES.
2. ALL CONCRETE SHALL MEET THE QUALITY ON GENERAL PAVING STANDARDS SHEET.
3. DRIVE APPROACH BLOCK OUTS TO BE 2'6" FROM BACK OF CURB INTO SLAB AND EXTEND FROM CURB RETURN TO CURB RETURN.
4. ALL CONCRETE SHALL BE CLASS "C" CONTAINING A MINIMUM OF 6 SACKS OF TYPE 1 CEMENT PER YARD AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,600 P.S.I. AT 28 DAYS (303.3.4.2). AGGREGATE SHALL BE 100% CRUSHED ANGULAR STONE (1" MAX.). ALL CONCRETE PLACED SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% AIR CONTENT. ALL OTHER ADMIXTURES SHALL REQUIRE THE PERMISSION OF THE ENGINEERING DEPARTMENT. FLY ASH MAY BE USED IN MIX DESIGNS AS DETAILED IN NCTCOG ITEM 303.2.4., 20% MAX. FINE AGGREGATE NOT TO EXCEED 50% MANUFACTURED SAND.
5. ALL DRIVE APPROACHES AND SIDEWALKS SHALL RECEIVE A LIGHT BROOM FINISH.



TYPICAL SECTION – MONOLITHIC CURB

N.T.S.



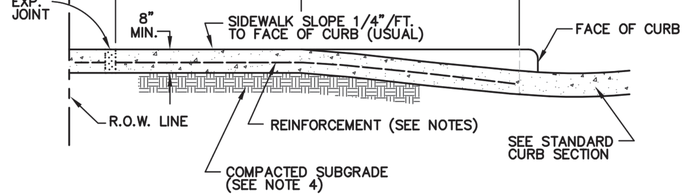
SECTION A–A

NOTES:

1. EXISTING CURB AND GUTTER, IF ANY, MUST BE SAWED.
2. REINFORCE DRIVE WITH #3 BARS AT 18" CENTERS, BOTH WAYS, SUPPORTED BY STANDARD CHAIRS (3' MAX. SPACING).
3. SIDEWALK SECTION THRU DRIVEWAY TO BE THE SAME THICKNESS AS THE DRIVEWAY APPROACH & TOOLED TO MATCH SIDEWALK.
4. SCARIFY, REMOVE ORGANIC MATERIALS, AND COMPACT SUBGRADE TO MINIMUM 95% ASTM D698, OPTIMUM MOISTURE CONTENT OR ABOVE.
5. DRILL INTO EXISTING STREET AT 18" CENTERS PER DETAIL SHT. P–5, BUTT JOINT DETAIL.
6. DRIVEWAY CURB CUT SHALL NOT EXTEND INTO INTERSECTION RADIUS OR CURB INLET TRANSITION.

RESIDENTIAL DRIVE APPROACH

N.T.S.



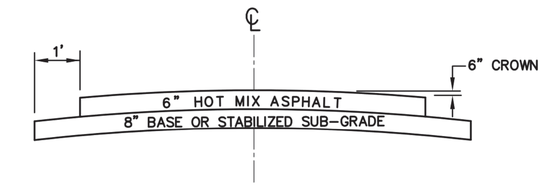
SECTION B–B

NOTES:

1. EXISTING CURB AND GUTTER, IF ANY, MUST BE SAWED.
2. REINFORCE DRIVE WITH #4 BARS AT 12" CENTERS, BOTH WAYS, SUPPORTED BY STANDARD CHAIRS (3' MAX. SPACING).
3. SIDEWALK SECTION THRU DRIVEWAY TO BE THE SAME THICKNESS AS THE DRIVEWAY APPROACH & TOOLED TO MATCH SIDEWALK.
4. SCARIFY, REMOVE ORGANIC MATERIALS, AND COMPACT SUBGRADE TO MINIMUM 95% ASTM D698, OPTIMUM MOISTURE CONTENT OR ABOVE.
5. DRILL INTO EXISTING STREET AT 12" CENTERS PER DETAIL SHT. P–5, BUTT JOINT DETAIL.
6. DRIVEWAY CURB CUT SHALL NOT EXTEND INTO INTERSECTION RADIUS OR CURB INLET TRANSITION.

COMMERCIAL DRIVE APPROACH

N.T.S.



NOTE:

BASE–8" CRUSHED STONE BASE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR AT OPTIMUM MOISTURE OR 8" LIME STABILIZED MATERIAL.

ASPHALT–4" BINDER BASE
2" TYPE "D" SURFACE
(CRUSHED STONE TYPE)

TACK COAT – 0.05 GAL/S.Y. OF MC – 30 TO BE APPLIED IF SURFACE OF HMAC IS OPENED TO TRAFFIC OR ALLOWED TO SET BETWEEN PLACEMENTS.

TEMPORARY ASPHALT TRANSITION DETAIL

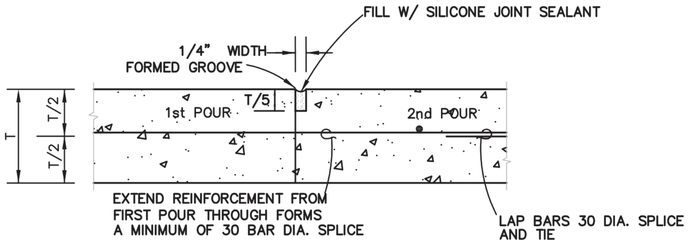
N.T.S.

DRIVE APPROACHES, CURB, & ASPHALT DETAILS

CITY OF MANSFIELD

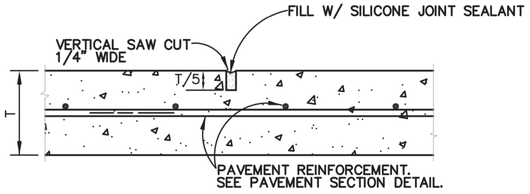
STANDARD CONSTRUCTION DETAILS

PAVING	DATE: NOV. 2014	SHEET NO. P–4



CONSTRUCTION JOINT

N.T.S.



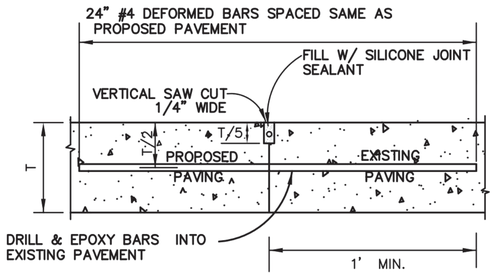
SAWED CONTRACTION JOINT

N.T.S.

GENERAL NOTES:

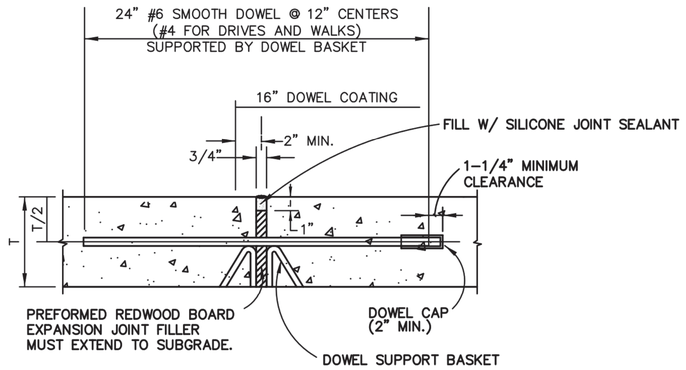
T= PAVEMENT THICKNESS

1. ALL CONSTRUCTION MATERIALS, METHODS AND PLACEMENT NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, OCTOBER 2004 EDITION UNLESS SUPERSEDED BY CITY OF MANSFIELD STANDARD SPECIFICATIONS OR MATERIAL TESTING POLICIES.
2. CONTRACTOR MUST USE MONOLITHIC CURB UNLESS DOWELED CURB IS PRE-APPROVED BY ENGINEERING DEPARTMENT.
3. DOWEL BARS OR REBAR PLACED INTO EXISTING PAVEMENT SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY. PUSHING DOWEL BARS OR REBAR INTO GREEN CONCRETE IS NOT ACCEPTABLE. SECURE DOWEL BARS OR REBAR INTO EXISTING PAVING WITH EPOXY GROUT INJECTED INTO HOLE WITH CAULKING GUN.
4. SEALANT SHALL BE SELF-LEVELING SILICONE PER CITY OF MANSFIELD DETAIL: "SILICONE JOINT SEALANT FOR CONCRETE PAVEMENT."
5. THE CONSTRUCTION JOINT IS TO BE USED BETWEEN SEPARATE POURS OF PROPOSED PAVEMENT. NOTE THAT IT REQUIRES THE REINFORCEMENT TO BE EXTENDED THROUGH THE FORM TO TIE TO THE NEXT POUR. THE BUTT JOINT IS TO BE USED BETWEEN EXISTING CONCRETE PAVEMENT (STREET, DRIVEWAY, OR BLOCK OUT) AND PROPOSED PAVEMENT, UNLESS AN EXPANSION JOINT IS CALLED FOR OR AN "L" BAR MAY BE ATTACHED TO STEEL MAT TO BE BENT OUT INTO NEXT PLACEMENT.



BUTT JOINT

N.T.S.

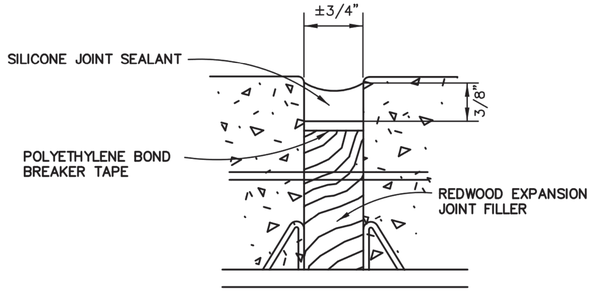


NOTE:

CAPPED SIDE OF
DOWEL TO BE GREASED

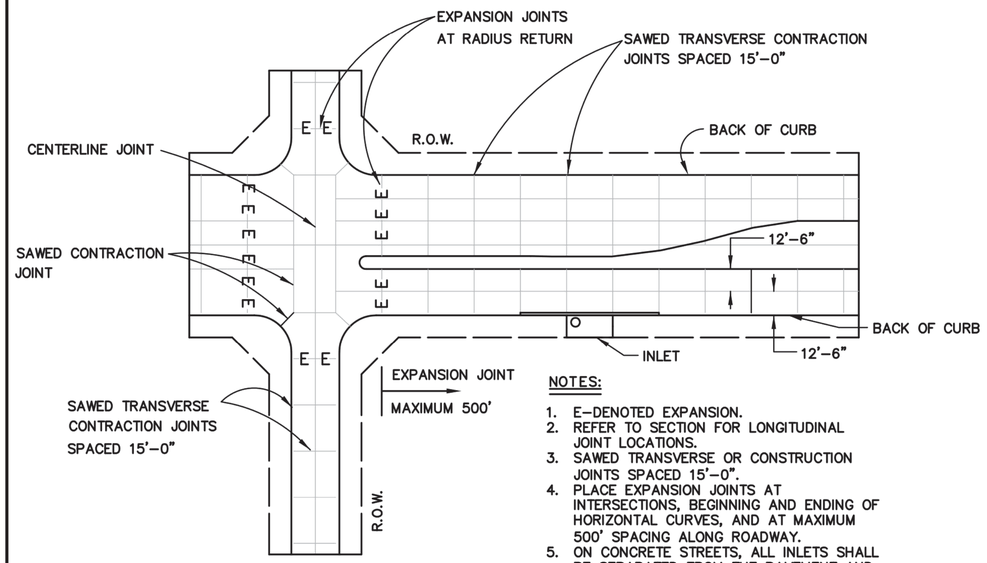
EXPANSION JOINT

N.T.S.



SEALANT DETAIL FOR TRANSVERSE EXPANSION JOINT

N.T.S.

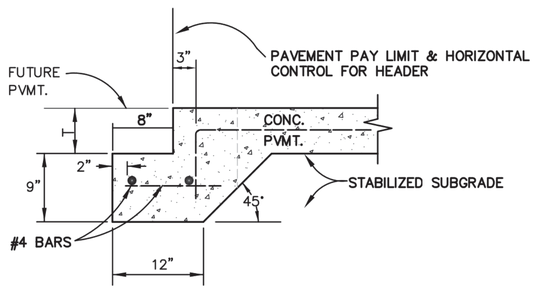


NOTES:

1. E-DENOTED EXPANSION.
2. REFER TO SECTION FOR LONGITUDINAL JOINT LOCATIONS.
3. SAWED TRANSVERSE OR CONSTRUCTION JOINTS SPACED 15'-0".
4. PLACE EXPANSION JOINTS AT INTERSECTIONS, BEGINNING AND ENDING OF HORIZONTAL CURVES, AND AT MAXIMUM 500' SPACING ALONG ROADWAY.
5. ON CONCRETE STREETS, ALL INLETS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BLOCKING OUT AS SHOWN ON SHEET SD-1.

SPACING DIAGRAM FOR TRANSVERSE JOINTS

N.T.S.

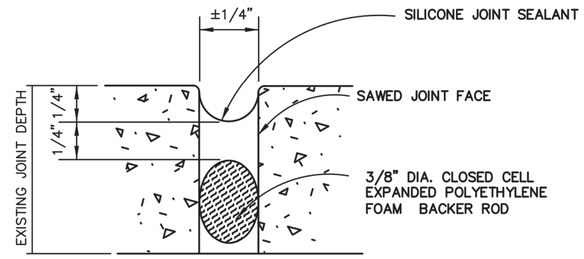


NOTE:

PAVEMENT BARS TO BE BENT
DOWN INTO HEADER AND
PAVEMENT TO BE MONOLITHIC.

CONCRETE HEADER

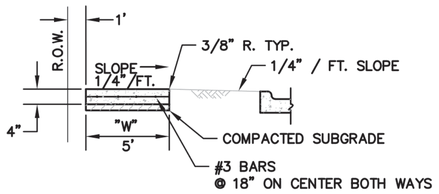
N.T.S.



SEALANT DETAIL FOR SAWED CONTRACTION JOINT

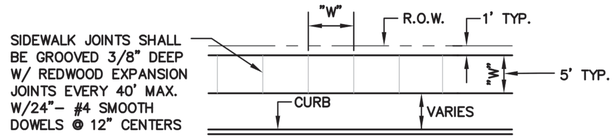
N.T.S.

JOINT & SEALANT DETAILS		
CITY OF MANSFIELD STANDARD CONSTRUCTION DETAILS		
PAVING	DATE: NOV. 2014	SHEET NO. P-5



STANDARD SIDEWALK SECTION

N.T.S.

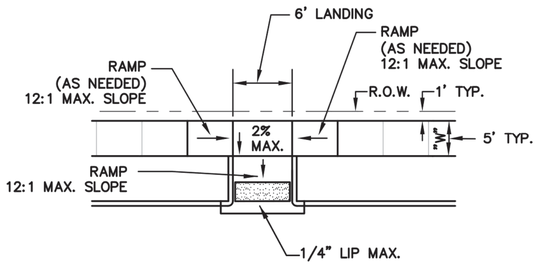


STANDARD SIDEWALK PLAN

N.T.S.

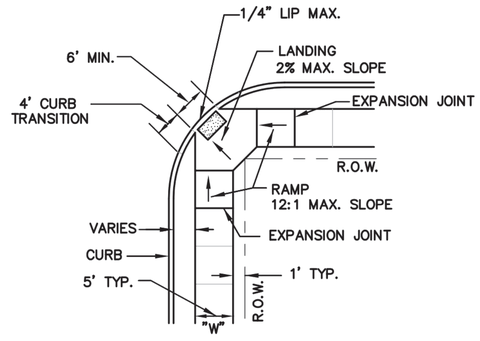
SIDEWALK GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS, METHODS AND PLACEMENT NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, OCTOBER 2004 EDITION UNLESS SUPERSEDED BY CITY OF MANSFIELD STANDARD SPECIFICATIONS OR MATERIAL TESTING POLICIES.
2. CONCRETE SHALL BE A MINIMUM OF 4 INCHES THICK, CLASS "A", (303.3.4.2) CONTAINING A MINIMUM OF 5 SACKS OF TYPE 1 CEMENT PER YARD (3000 PSI). AGGREGATE SHALL BE 100% CRUSHED ANGULAR STONE (1" MAX.). ALL CONCRETE PLACED SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% AIR CONTENT. FINE AGGREGATE NOT TO EXCEED 50% MANUFACTURED SAND.
3. CHAMFER ALL EXPOSED EDGES OF CONCRETE WALLS 3/4 INCH.
4. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A–615 GRADE 60. REINFORCING STEEL SHALL BE PLACED WITH A MINIMUM OF 1–½ INCH OF COVER FOR #5 BARS OR SMALLER. WHERE REINFORCING BARS ARE SPLICED, A 30 DIAMETER LAP SHALL BE USED.
5. CURBED RAMP BLOCK OUTS TO BE 1'6" FROM BACK OF CURB INTO SLAB AND EXTEND FROM CURB RETURN TO CURB RETURN.
6. SUBGRADE SHALL CONSIST OF NATIVE SOIL OR SAND COMPACTED TO A DENSITY NOT LESS THAN 95% ASTM D698, OPTIMUM MOISTURE CONTENT OR ABOVE.
7. SIDEWALKS SHALL BE FINISHED BY LIGHTLY BROOMING SURFACE TRANSVERSE TO DIRECTION OF TRAFFIC.
8. AN APPROVED WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE SURFACE OF THE PAVEMENT AS SOON AS IT HAS BEEN PLACED AND FINISHED.
9. RETAINING WALLS TO HAVE REDWOOD EXPANSION JOINTS @ 40' MAX. W/24"–#4 SMOOTH DOWELS @ 12" CENTERS.
10. FOR ADDITIONAL INFORMATION AND DETAILS, SEE TXDOT PED STANDARDS, US ACCESS BOARD ProAG, AND TAS REGULATIONS.
11. TRUNCATED DOMES TO BE APPROVED ANTIQUE RED BLOCK PAVERS ONLY.



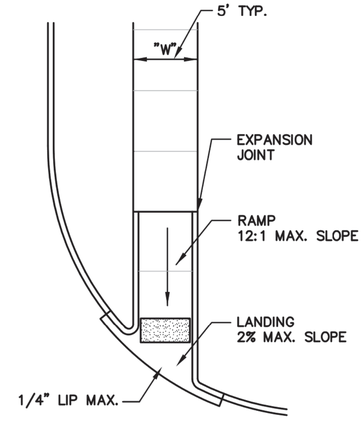
PERPENDICULAR RAMP

N.T.S.



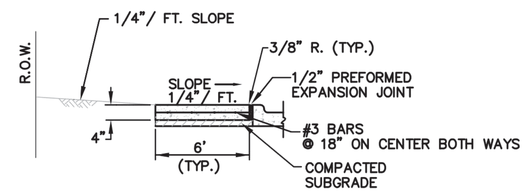
INTERSECTION RAMP

N.T.S.



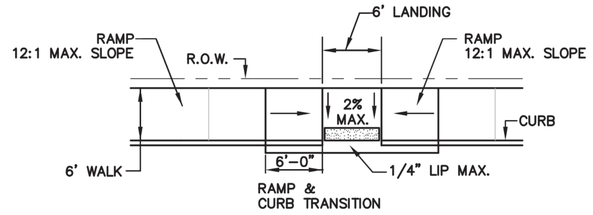
DIRECTIONAL CURB RAMP

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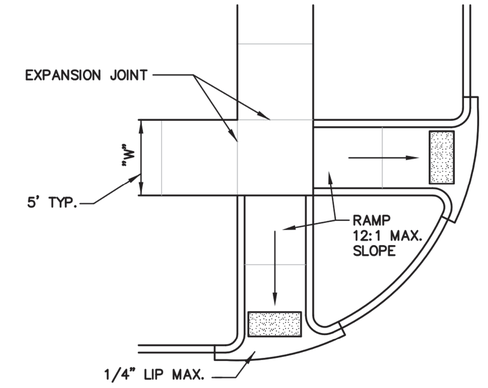
SIDEWALK ABUTTING CURB SECTION

N.T.S.



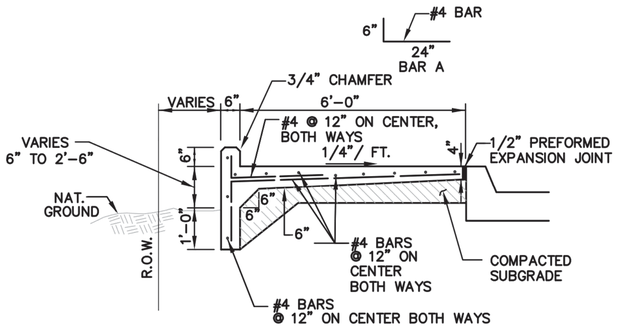
PARALLEL RAMP

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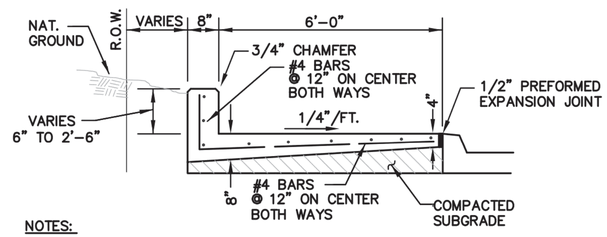
SPLIT RAMPS (STREET RADIUS < 15')

N.T.S.



SIDEWALK WITH CURB AND TOEWALL

N.T.S.

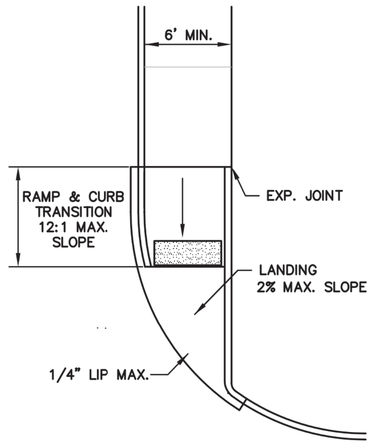


NOTES:

1. INSTALL 1" DIA. PVC WEEP HOLE ON 10' CENTERS.
2. SIDEWALK JOINTING TO BE CONTINUOUS UP FACE OF WALL WITH CHAMFER.

SIDEWALK WITH RETAINING WALL

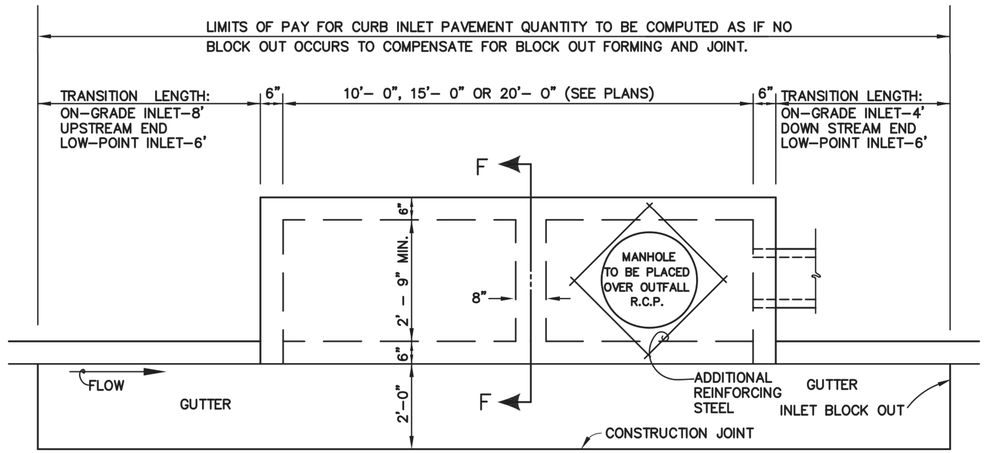
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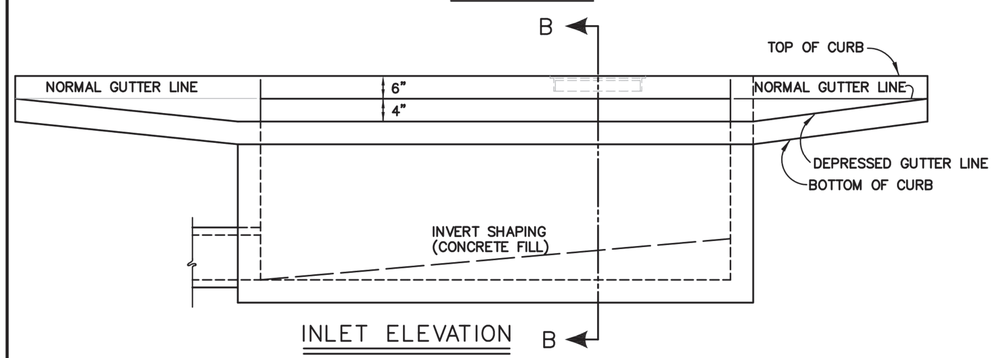
DIRECTIONAL CURB RAMP FOR WALK ABUTTING CURB

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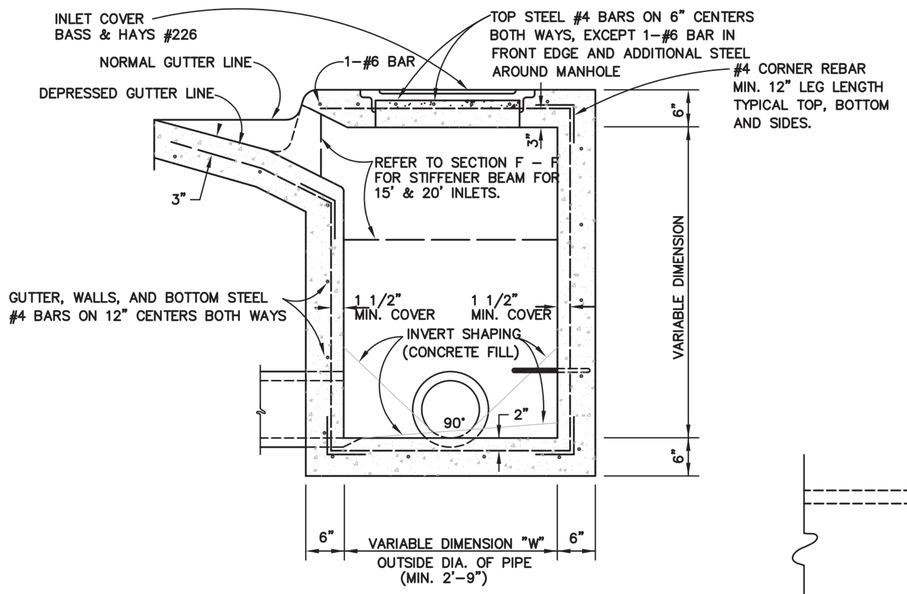
SIDEWALK & RAMP DETAILS		
CITY OF MANSFIELD STANDARD CONSTRUCTION DETAILS		
PAVING	DATE: NOV. 2014	SHEET NO. P–6



INLET PLAN

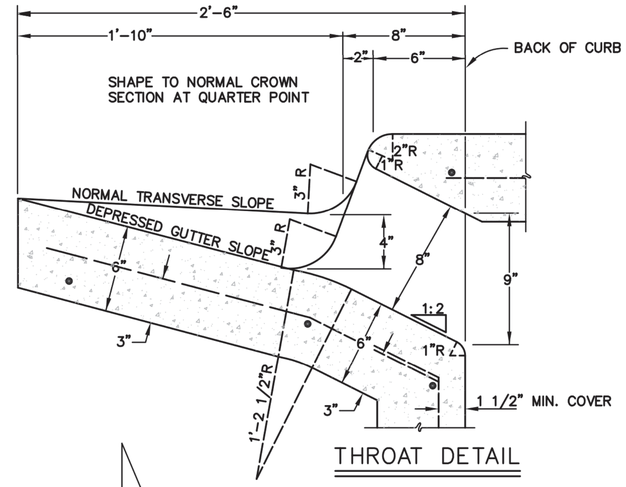


INLET ELEVATION

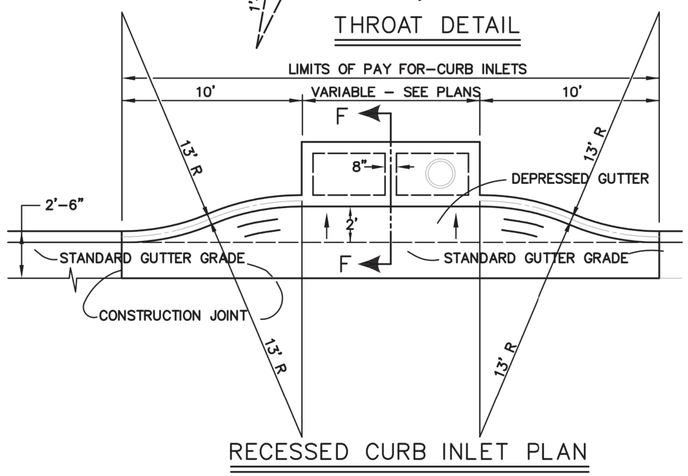


SECTION B-B

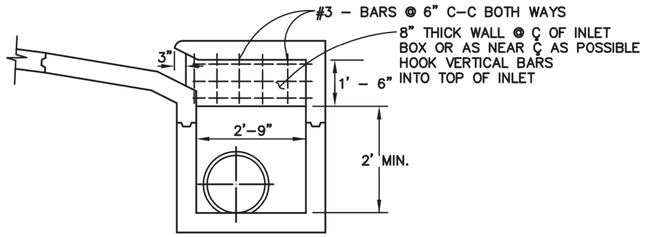
STANDARD CURB INLET DETAIL



THROAT DETAIL

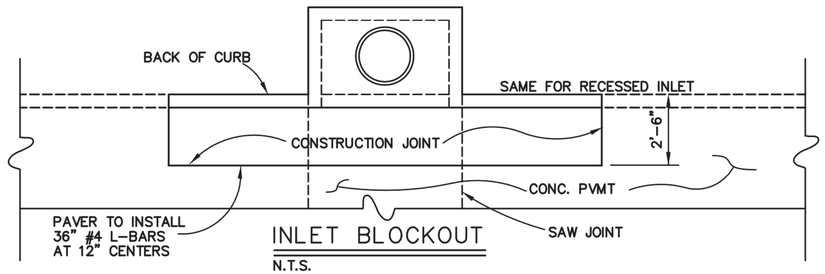


RECESSED CURB INLET PLAN



SECTION F-F

INLET MID BOX STIFFENER BEAM FOR 15', 20' & LARGER INLETS

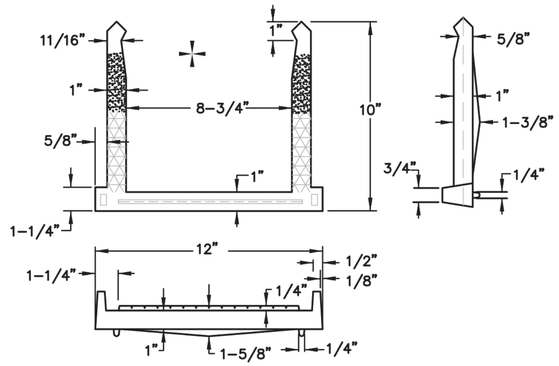


INLET BLOCKOUT

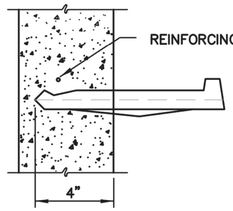
N.T.S.

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2. ALL CONCRETE SHALL BE CLASS "C", (6 SACK, 3600 PSI) (702.2.4.2). AGGREGATE SHALL BE 100% CRUSHED ANGULAR STONE (1" MAX). ALL CONCRETE PLACED SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% AIR CONTENT. ALL OTHER ADMIXTURES SHALL REQUIRE THE PERMISSION OF THE ENGINEERING DEPARTMENT.
3. ON CONCRETE STREETS ALL INLETS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BLOCKING OUT AROUND INLETS AS SHOWN.
4. ALL REINFORCING STEEL SHALL BE DEFORMED BARS (ASTM A-615 GRADE 60). REINFORCING STEEL SHALL BE PLACED WITH A MINIMUM OF 1-½" COVER.
5. WHERE REINFORCING BARS ARE SPLICED, A MINIMUM 30 DIAMETER LAP SHALL BE USED. MANUFACTURED BENDS OR FACTORY MADE "L" BARS SHALL BE USED IN ALL CORNERS, AND SHALL BE LONG ENOUGH TO PERMIT A MINIMUM OF A 30 DIAMETER SPLICE.
6. INLETS LARGER THAN 10' SHALL HAVE TWO (2) LIDS. ONE TO BE LOCATED OVER OUTFALL AND THE OTHER LOCATED ON THE OPPOSITE SIDE OF THE STIFFENER BEAM.
7. COVER IS A STANDARD CAST IRON LID AND RING WITH AN ATTACHED CHAIN EMBEDDED IN CONCRETE (BASS & HAYES 226).
8. PRE-CAST INLETS WILL NOT BE PERMITTED.
9. TOP AND THROAT TO BE PLACED MONOLITHICALLY.



STEP DETAILS



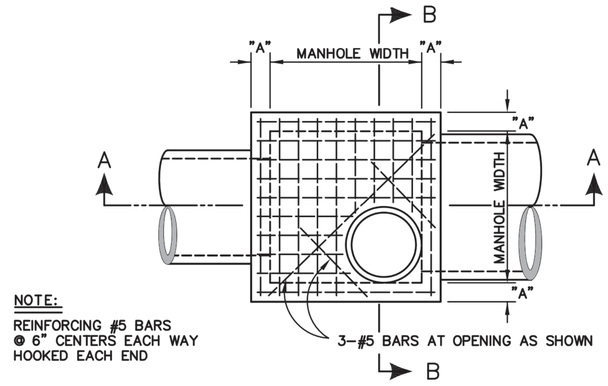
INSTALLATION

NOTE:

1. INLET AND STORM DRAIN STEPS SHALL BE AS MANUFACTURED BY M.A. INDUSTRIES, INC. OF PEACHTREE CITY, GA. OR APPROVED EQUAL. STEPS SHALL REQUIRE A STEEL REINFORCING BAR AS SHOWN IN DETAIL.
2. STEPS SHALL BE PLACED IN ALL INLETS OR STORM VAULTS WHERE THE DIMENSION FROM THE FLOW LINE TO THE TOP OF THE MANHOLE LID MEETS OR EXCEEDS 5'.
3. STEPS SHALL BE PLACED WITH A MAXIMUM VERTICAL SEPARATION OF 16".

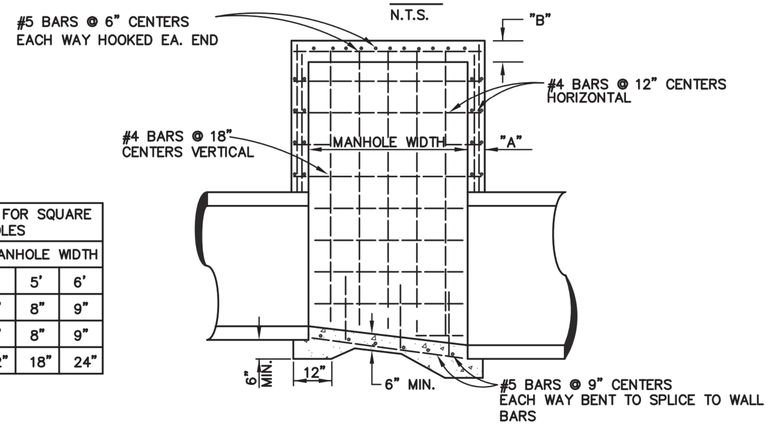
INLET STEP DETAIL

CURB INLET DETAILS		
CITY OF MANSFIELD STANDARD CONSTRUCTION DETAILS		
STORM DRAIN	DATE: NOV. 2014	SHEET NO. SD-1



PLAN

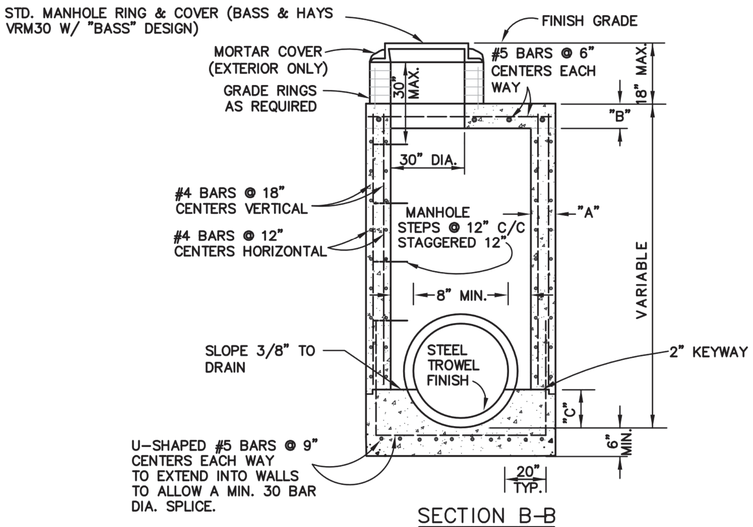
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SECTION A-A

N.T.S.

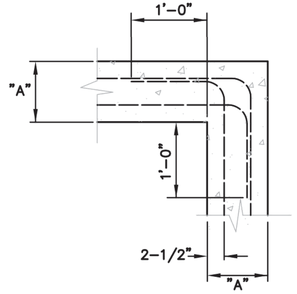
DIMENSIONS FOR SQUARE MANHOLES			
DIMENSION	MANHOLE WIDTH		
	4'	5'	6'
A	8"	8"	9"
B	8"	8"	9"
C	12"	18"	24"



SECTION B-B

STANDARD SQUARE MANHOLE
54" DIAMETER & SMALLER PIPES

N.T.S.

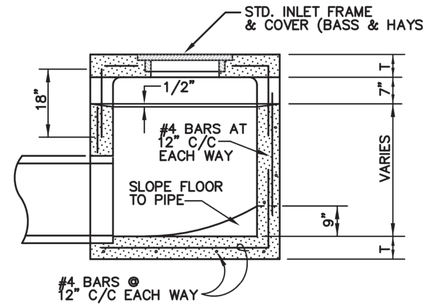


TYPICAL CORNER
DETAIL
(PLAN VIEW)

N.T.S.

GENERAL NOTES:

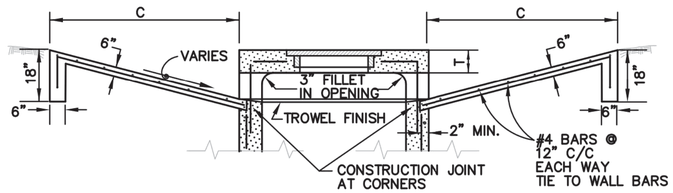
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2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS (ASTM A-615 GRADE 60). REINFORCING STEEL SHALL BE PLACED WITH A MINIMUM OF 1-½" COVER FOR #5 BARS AND SMALLER.
3. WHERE REINFORCING BARS ARE SPLICED, A MINIMUM 30 BAR DIAMETER LAP SPLICE SHALL BE USED. MANUFACTURED BENDS OR FACTORY MADE "L" BARS SHALL BE USED IN ALL CORNERS, AND SHALL BE LONG ENOUGH TO PERMIT A MINIMUM OF 30 BAR DIAMETER LAP SPLICE.
4. ALL CONCRETE SHALL BE CLASS "C", (6 SACK, 3600 PSI) (702.2.4.2). AGGREGATE SHALL BE 100% CRUSHED ANGULAR STONE (1" MAX.). ALL CONCRETE PLACED SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% AIR CONTENT. ALL OTHER ADMIXTURES SHALL REQUIRE THE PERMISSION OF THE ENGINEERING DEPARTMENT.
5. DROP INLET COVER (BASS & HAYES 226) LID SHALL BE ATTACHED WITH A CHAIN EMBEDDED OR ANCHORED IN CONCRETE.
6. PRE-CAST INLETS OR MANHOLES WILL NOT BE PERMITTED FOR PUBLIC USE.
7. ALL DROP INLETS SHALL HAVE APRON.



SECTION D - D

N.T.S.

DIMENSIONS FOR DROP INLET				
INLET SIZE	A	B	C	T
2' X 2'	36"	24"	2'	6"
3' X 3'	48"	36"	3'	6"
4' X 4'	60"	48"	4'	6"

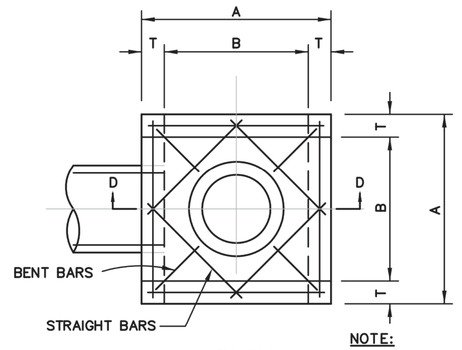


DROP INLET APRON

N.T.S.

* CHAMFER ALL EXPOSED EDGES 3/4"

* WARP APRON TO MATCH FLOWLINES OF INCOMING DITCHES



PLAN

NOTE:
ALL REINFORCING IN TOP
TO BE #5 BARS @ 6"
CENTERS

DROP INLET

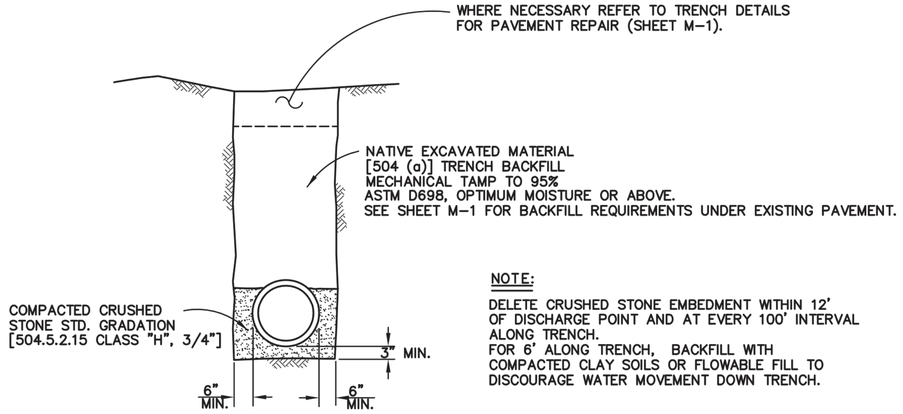
N.T.S.

MANHOLE AND DROP INLET DETAILS

CITY OF MANSFIELD

STANDARD CONSTRUCTION DETAILS

STORM DRAIN	DATE: NOV. 2014	SHEET NO. SD-2

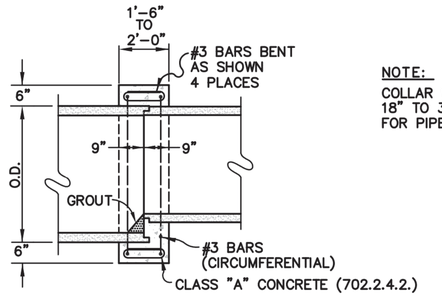


NOTE:

DELETE CRUSHED STONE EMBEDMENT WITHIN 12' OF DISCHARGE POINT AND AT EVERY 100' INTERVAL ALONG TRENCH.
FOR 6' ALONG TRENCH, BACKFILL WITH COMPACTED CLAY SOILS OR FLOWABLE FILL TO DISCOURAGE WATER MOVEMENT DOWN TRENCH.

STORM DRAIN PIPE EMBEDMENT DETAIL

N.T.S.

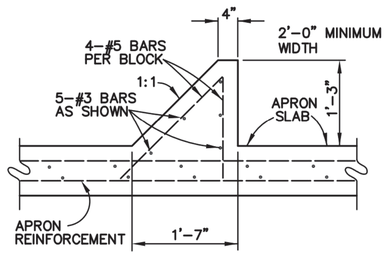


NOTE:

COLLAR WIDTH TO BE MIN. 18" FOR PIPE SIZES 18" TO 30". COLLAR WIDTH TO BE MIN. 24" FOR PIPE SIZES 33" & LARGER.

CONCRETE COLLAR DETAIL

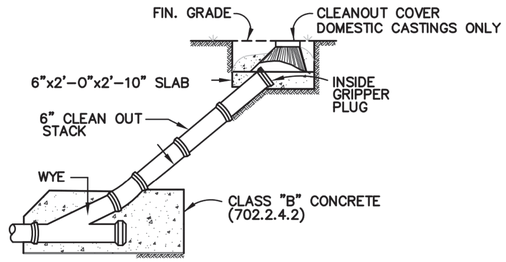
N.T.S.



BAFFLE DETAIL AT CULVERT OUTLET

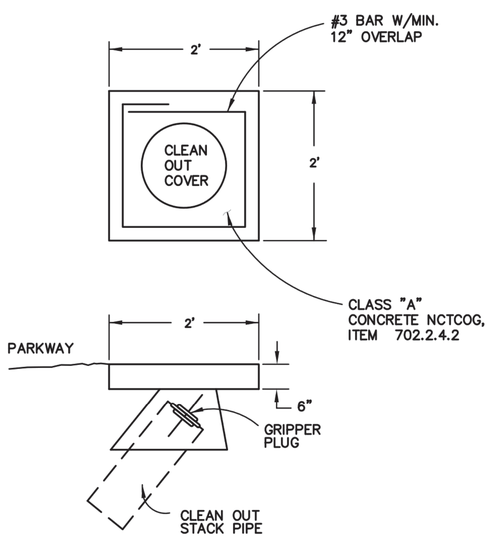
N.T.S.

TRENCH, COLLAR & MISC. DETAILS		
CITY OF MANSFIELD STANDARD CONSTRUCTION DETAILS		
STORM DRAIN	DATE: NOV. 2014	SHEET NO. SD-3



CLEAN – OUT

N.T.S.

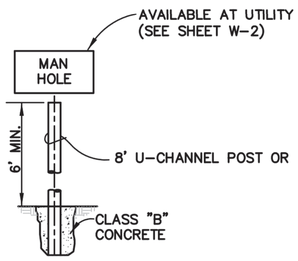


CLEANOUT COVER PAD DETAIL

N.T.S.

NOTE:

THIS DETAIL FOR CLEAN OUTS NOT IN PAVEMENT.

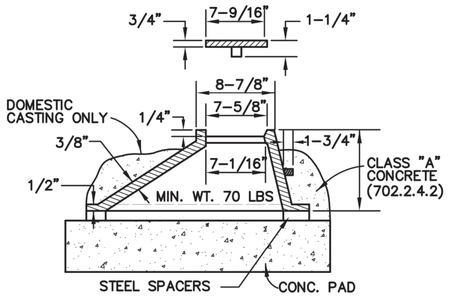


MANHOLE MARKER

N.T.S.

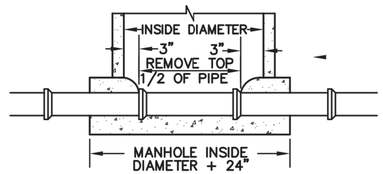
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2. RING AND COVER SHALL BE DOMESTIC CASTING ONLY. (BASS & HAYS VRM 30 WITH CITY LOGO). CAST IN PLACE MANHOLE OR WEIGHTED DESIGNED CONE WITH BOLT DOWN RING AND COVER TO BE USED IN FLOOD-PRONE AREA AND MUST BE ANCHORED INTO CONE.
3. MANHOLE MARKERS SHALL BE INSTALLED IN ALL UNDEVELOPED AREAS.
4. MANHOLES IN DEVELOPED AREAS THAT ARE NOT IN PAVEMENT SHALL HAVE A 4'x4'x6" CONCRETE PAD.
5. MANHOLES SHALL BE PLACED MONOLITHICALLY WITH STREET. IF A BLOCK OUT IS NEEDED INSPECTOR WILL PRE-APPROVE SIZE & SHAPE OF BLOCK OUT.
6. INVERTS FOR CAST-IN-PLACE MANHOLES SHALL BE MADE BY PLACING PIPE CONTINUOUSLY THROUGH MANHOLES AND CUTTING OUT THE TOP OF THE PIPE. A MINIMAL AMOUNT OF CONCRETE INVERT BETWEEN PIPE ENDS WILL BE PERMITTED.
7. CONCRETE FOR MANHOLES TO BE CLASS "F" (6.5 SACK, 4200 PSI) PER NCTCOG SPECIFICATIONS 702.2.4.2. ALL CONCRETE SHALL CONTAIN SUFFICIENT AIR ENTRAINING AGENT TO YIELD 5% AIR CONTENT.



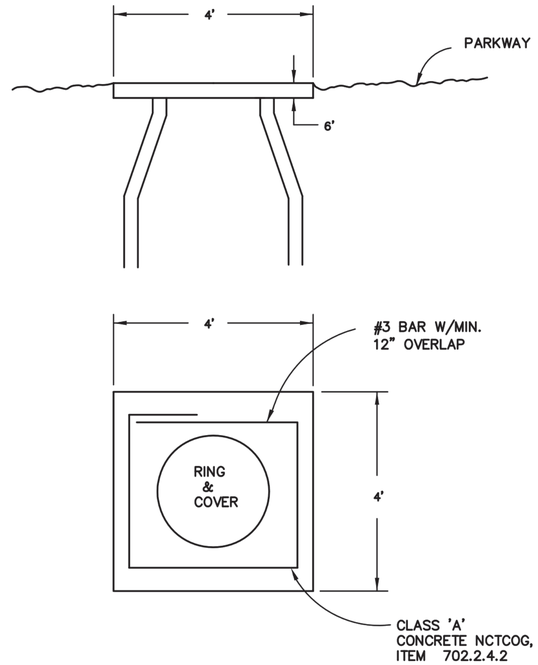
CLEANOUT COVER

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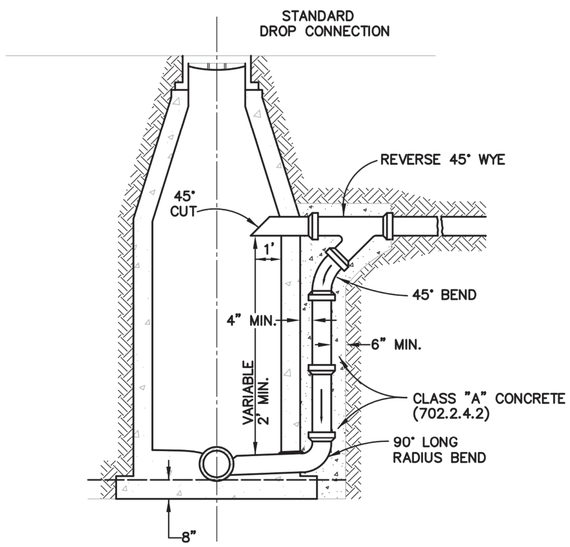
SECTION "A – A"

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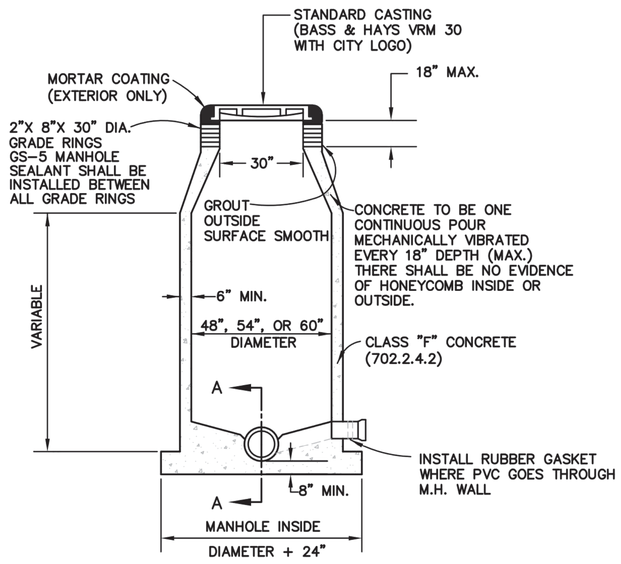
MANHOLE PAD DETAIL

N.T.S.



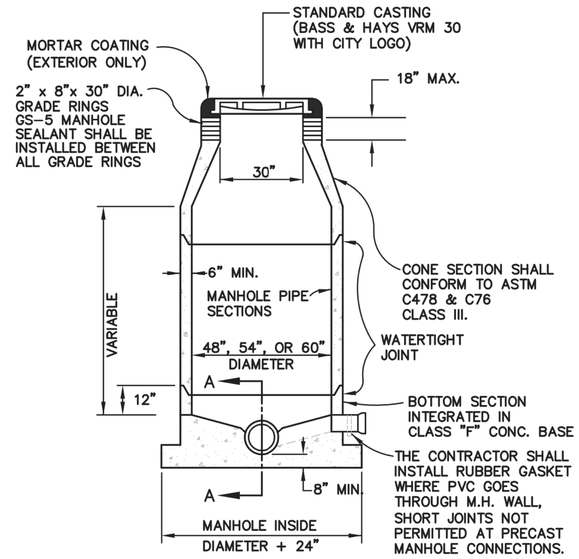
DROP CONNECTIONS FOR SANITARY SEWER MANHOLE

N.T.S.



CAST IN PLACE MANHOLE

N.T.S.



PRECAST CONCRETE MANHOLE

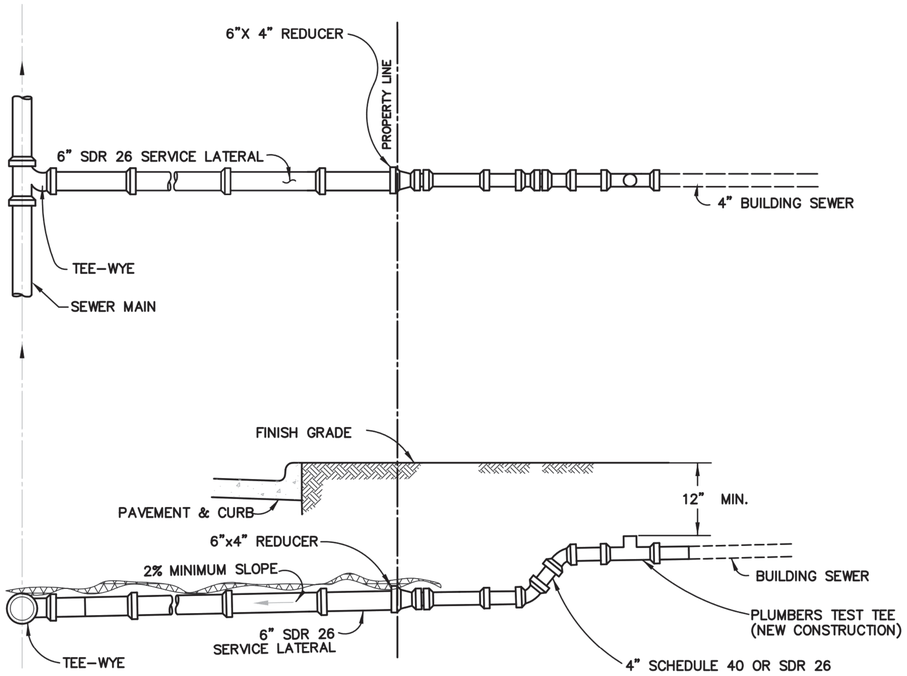
N.T.S.

MANHOLE & CLEANOUT DETAILS

CITY OF MANSFIELD

STANDARD CONSTRUCTION DETAILS

SANITARY SEWER	DATE: NOV. 2014	SHEET NO. SS-1

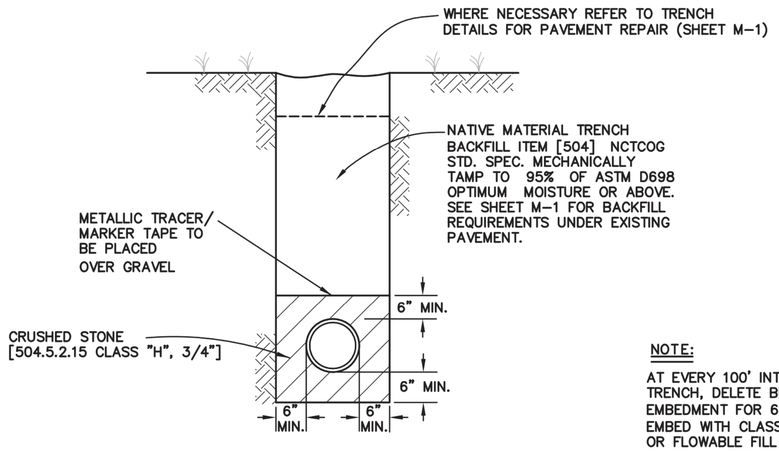


NOTES:

1. RUBBER BOOTS WILL ONLY BE PERMITTED FOR CLAY OR CONCRETE TILE SERVICE PIPE AND MUST BE CONCRETE ENCASED.

STANDARD SEWER SERVICE CONNECTION

N.T.S. (PLUMBER CONNECTION OR CIP RECONSTRUCTION)

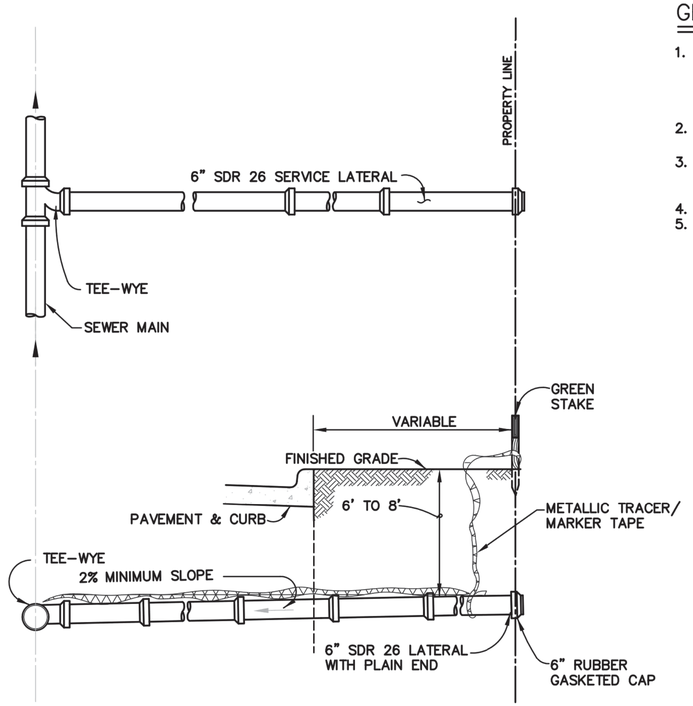


NOTE:

AT EVERY 100' INTERVAL ALONG TRENCH, DELETE BEDDING AND EMBEDMENT FOR 6' ALONG TRENCH. EMBED WITH CLASS "B" CONCRETE OR FLOWABLE FILL TO DISCOURAGE WATER MOVEMENT DOWN TRENCH.

SANITARY SEWER TYPICAL EMBEDMENT

N.T.S.

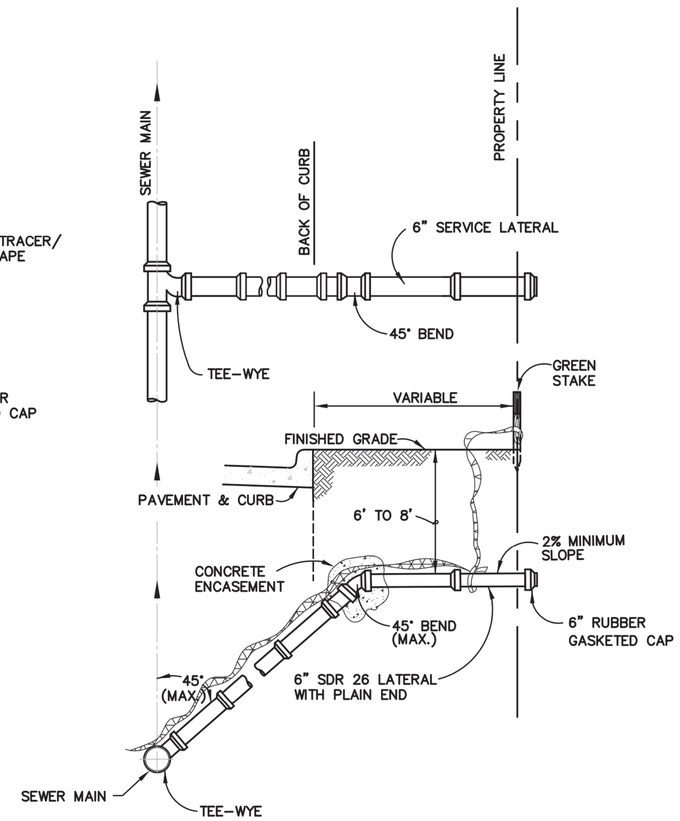


STANDARD SEWER SERVICE FOR NEW CONSTRUCTION

N.T.S.

GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS, METHODS AND PLACEMENT NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, OCTOBER 2004 EDITION UNLESS SUPERSEDED BY CITY OF MANSFIELD STANDARD SPECIFICATIONS OR MATERIAL TESTING POLICIES.
2. WHERE COVER IS LESS THAN 3.5 FEET, SANITARY SEWER MAINS AND LATERALS SHALL BE CONCRETE ENCASED OR CAPPED (SEE SHEET M-1).
3. METALLIC TRACER/MARKER TAPE, GREEN IN COLOR AND MARKED "SANITARY SEWER", TO BE PLACED ALONG MAIN LINES & SERVICES ON TOP OF CRUSHED STONE EMBEDMENT.
4. SEE SHEET W-1 FOR SERVICE LOCATION.
5. SEE SHEET MS-2 FOR APPROVED MATERIAL LIST.



STANDARD DEEP SERVICE DETAIL FOR NEW CONSTRUCTION

N.T.S.

NOTES:

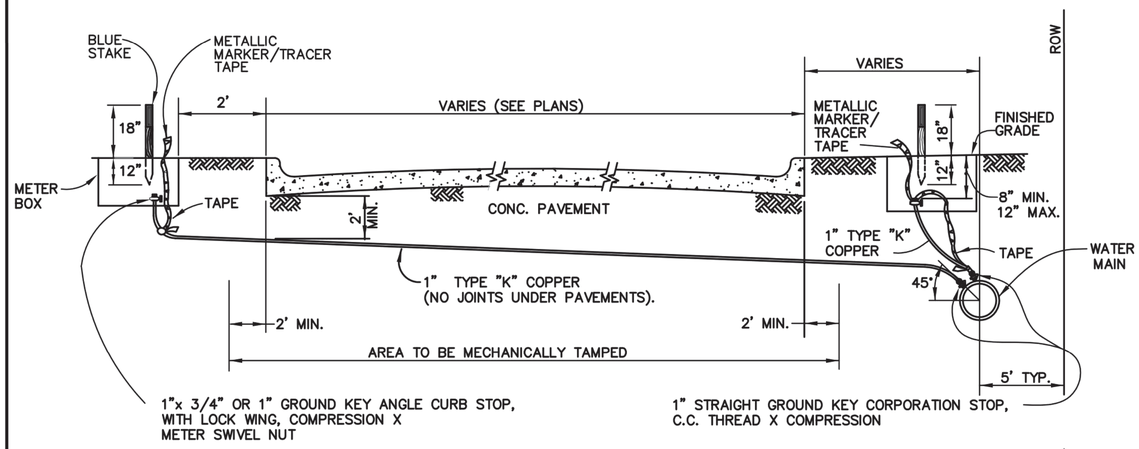
1. ROTATE TEE-WYE TO 45° MAX.
2. ONLY ONE 45° BEND WILL BE USED, 45° BEND MUST BE PLACED OUTSIDE OF PAVEMENT WHERE POSSIBLE.
3. CONCRETE ENCASE 45° BEND.

SERVICE & TRENCH DETAILS

CITY OF MANSFIELD

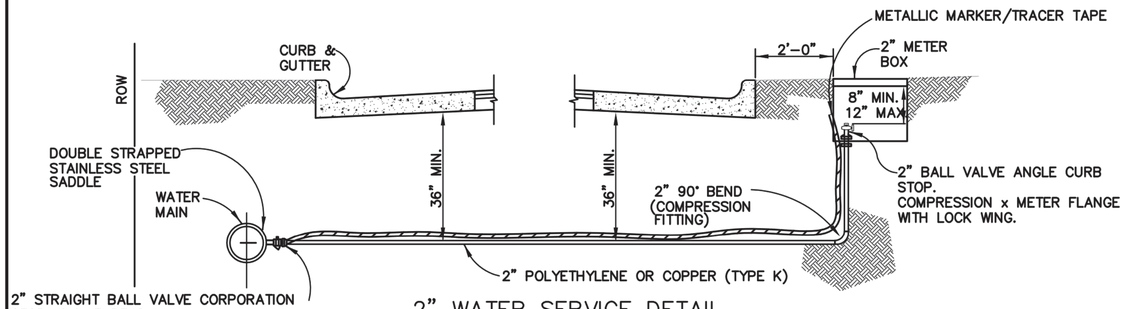
STANDARD CONSTRUCTION DETAILS

SANITARY SEWER	DATE: NOV. 2014	SHEET NO. SS-2



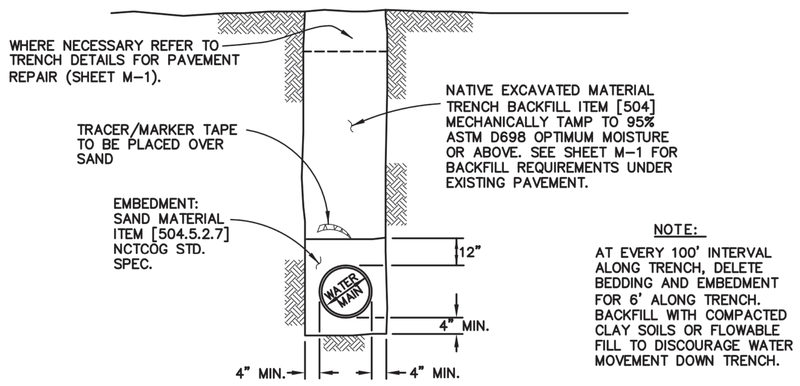
1" WATER SERVICE DETAIL

N.T.S. (TO BE USED FOR 3/4" & 1" METER, SEE NOTE 15)



2" WATER SERVICE DETAIL

N.T.S. (TO BE USED FOR 1 1/2" & 2" METERS, SEE NOTE 16)



NOTE:

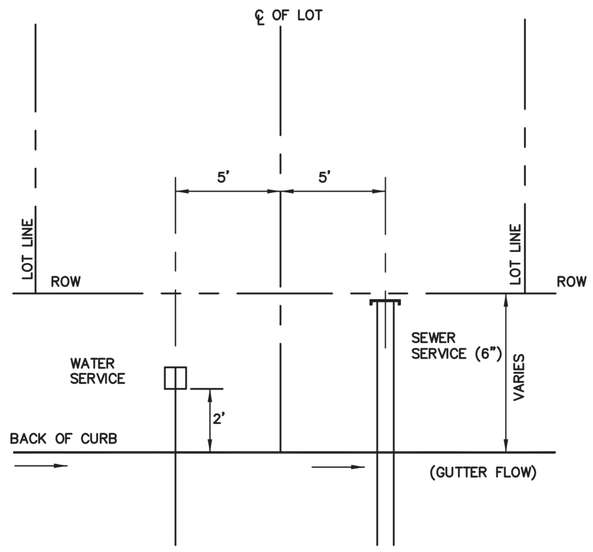
AT EVERY 100' INTERVAL ALONG TRENCH, DELETE BEDDING AND EMBEDMENT FOR 6' ALONG TRENCH. BACKFILL WITH COMPACTED CLAY SOILS OR FLOWABLE FILL TO DISCOURAGE WATER MOVEMENT DOWN TRENCH.

WATER MAIN PIPE TYPICAL EMBEDMENT DETAIL

N.T.S.

GENERAL NOTES:

1. ALL CONSTRUCTION MATERIALS, METHODS, AND PLACEMENTS NOT DETAILED BELOW SHALL MEET OR EXCEED THE STANDARD SPECIFICATIONS OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, OCTOBER 2004 EDITION, UNLESS SUPERSEDED BY CITY OF MANSFIELD STANDARD SPECIFICATIONS OR MATERIAL TESTING POLICIES.
2. ALL WATER MAINS TO BE P.V.C. AWWA C-900, CLASS 150, DR-18 INSTALLED W/METALLIC MARKER TAPE LABELED "WATERLINE BELOW".
3. BEVELED END OF PIPE WILL BE REMOVED WHEN USED IN MJ FITTING.
4. ALL FITTINGS TO BE MJ UNLESS OTHERWISE NOTED. ALL VERTICAL BENDS TO BE RESTRAINED W/RETAINER GLANDS. HORIZONTAL BENDS OR FITTINGS TO BE RESTRAINED AS NEEDED PER ENGINEER/INSPECTOR.
5. ALL 10" AND SMALLER WATER MAINS WILL BE HELD TO A MINIMUM COVER OF 42" UNLESS OTHERWISE BE SET BY THE ENGINEERING DEPARTMENT. 12" MAINS AND LARGER SHALL FOLLOW PLAN GRADE & PROFILE OF APPROVED CONSTRUCTION PLAN.
6. SERVICE LOCATION SHALL BE STAKED BY SURVEYOR PRIOR TO THE INSTALLATION OF ANY WATER SERVICES, SEWER SERVICES, AND/OR METER BOXES.
7. STORAGE: P.V.C. WATER PIPE IS ALLOWED TO BE STORED A MAXIMUM OF SIX (6) MONTHS WITHOUT COVER. THEREAFTER ALL PIPES SHOULD BE COVERED OR KEPT AWAY FROM SUN LIGHT AND PROTECTED FROM OTHER ELEMENTS.
8. ALL IRON FITTINGS, INCLUDING FIRE HYDRANTS AND VALVES, SHALL BE POLY WRAPPED.
9. EPOXY COATED TAPPING SADDLES SHALL BE USED. 1" SADDLES WILL HAVE SINGLE STAINLESS STEEL STRAP AND 2" WILL HAVE DOUBLE STAINLESS STEEL STRAP. GASKET ON SADDLE TO BE FLAT, NO O-RINGS WILL BE PERMITTED. O.D. OF SADDLE SHALL NOT BE LARGER THAN O.D. OF PIPE. SADDLE MUST BE POLY-WRAPPED.
10. ALL TAPS LARGER THAN 2" WILL BE MADE USING TAPPING SLEEVES, NOT SADDLES.
11. TAPS WILL BE A MINIMUM OF 2' APART WITH TAPS NO CLOSER THAN 1' TO END OF PIPE. CUTTER FOR TAPS TO BE DOUBLE SLOTTED TYPE.
12. IT IS THE RESPONSIBILITY OF THE DEVELOPER TO FURNISH AND INSTALL METER BOXES AS APPROVED BY THE ENGINEERING DEPARTMENT.
13. METER BOXES WILL NOT BE PERMITTED IN DRIVEWAYS OR SIDEWALKS EXCEPT FOR COMMERCIAL BUILDING METERS AS APPROVED BY ENGINEERING DEPARTMENT. WHEN METER IS ALLOWED IN CONCRETE A TRAFFIC RATED BOX SHALL BE USED AND BOLLARDS TO BE PLACED AROUND METER FOR PROTECTION WHERE DIRECTED BY ENGINEER.
14. METER BOXES SHALL HAVE A 2' MIN. SPACING FROM CURBS, DRIVEWAYS, MAIL BOXES, ETC.
15. ALL ¾" WATER SERVICES SHALL BE MADE BY USING 1" CORPORATION STOP, 1" SADDLE, 1" COPPER, AND 1"X ¾" ANGLE CURB STOP.
16. 1½" WATER SERVICES SHALL BE MADE BY USING ALL 2" PARTS. THE 1½" METER WILL BE SET ON A 2" ANGLE CURB STOP.
17. ALL TAPPING VALVES SHALL BE BLOCKED PRIOR TO MOUNTING TAPPING MACHINE.
18. SIZE ON SIZE TAPS SHALL NOT BE PERMITTED ON AC PIPE.
19. SEE SHEET MS-1 AND MS-2 FOR APPROVED PARTS LIST.
20. ALL WATER SERVICES SHALL HAVE NO JOINTS OR SPLICES UNDER PAVEMENT.



SERVICE LOCATION DETAIL

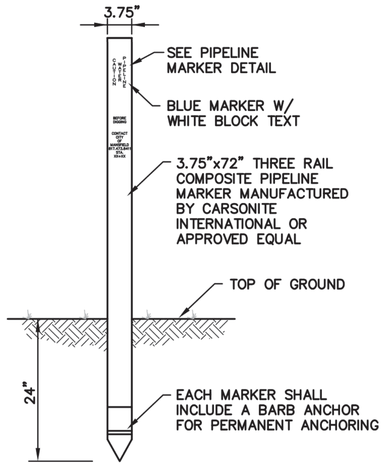
N.T.S.

WATER SERVICE, GENERAL NOTES, & TRENCH DETAILS

CITY OF MANSFIELD

STANDARD CONSTRUCTION DETAILS

WATER	DATE: NOV. 2014	SHEET NO. W-1



PIPELINE MARKER

N.T.S.

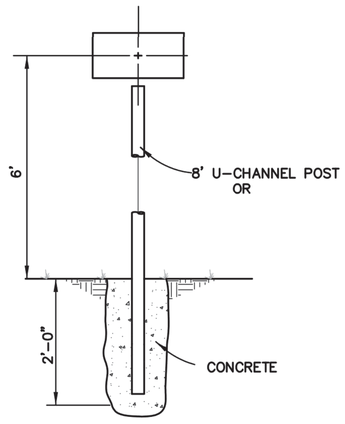


NOTES:

1. MARKER SHALL BE LOCATED ALONG THE PIPELINE AT A 200' INTERVAL AND AT ALL BENDS.
2. EACH MARKER SHALL HAVE A STICKER WITH THE FOLLOWING INFORMATION "CAUTION WATER PIPELINE, CONTACT CITY OF MANSFIELD (817) 473-8411, STA. XX+XX.

PIPELINE MARKER DETAIL

N.T.S.



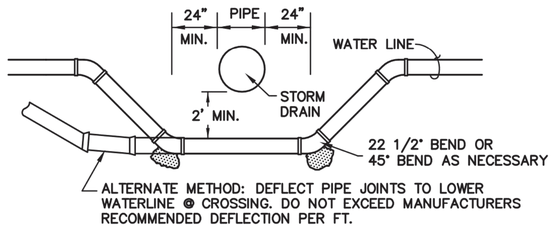
TEST STATION	WATER METER
WATER VALVE	MANHOLE
BLOW OFF	AIR RELEASE

NOTE:

1. MARKERS TO BE INSTALLED IN UNDEVELOPED AREAS OR AS INDICATED ON PLANS OR AS DIRECTED BY INSPECTOR.
2. MARKERS MUST BE PURCHASED FROM UTILITY DEPARTMENT. 817-473-8411.

MARKER INSTALLATION DETAIL

N.T.S.

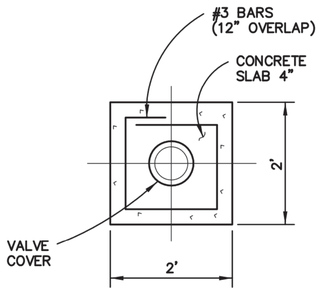


WATER LINES LOWERING

N.T.S.

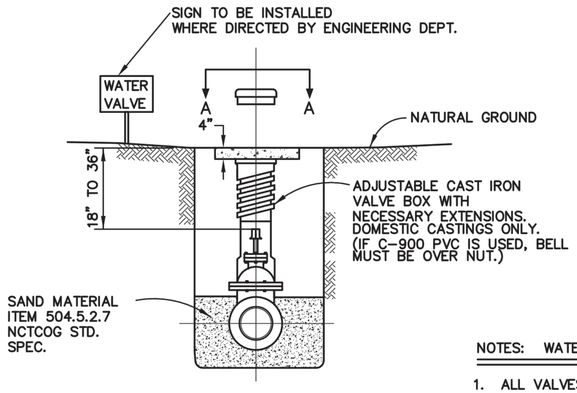
NOTES:

1. REFER TO CONSTRUCTION PLANS FOR TOP OF WATER LINE ELEVATION AT CROSSING.
2. REFER TO CONSTRUCTION PLANS FOR CROSSING DETAILS FOR 12" AND LARGER PIPES.
3. ALL JOINTS TO BE RESTRAINED WITH RETAINER GLANDS.



VIEW A-A

N.T.S.

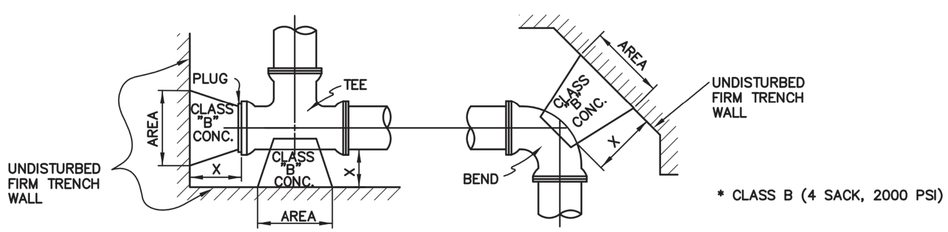


TYPICAL VALVE SETTING AND BOX 4" TO 12" GATE VALVE

N.T.S.

NOTES: WATER VALVE

1. ALL VALVES TO BE RESILIENT SEAT GATE VALVES WITH NON-RISING STEMS, COUNTER- CLOCKWISE OPENING.
2. VALVE STEM EXTENSIONS WITH ROCK GUARDS AND LOCK CLIPS SHALL BE INSTALLED WHERE NECESSARY TO PLACE OPERATING NUT NOT MORE THAN 36" BELOW FINISHED GRADE.



* CLASS B (4 SACK, 2000 PSI)

MINIMUM REQUIRED BEARING AREA IN SQUARE FEET					
PIPE SIZE	PLUGS & TEES	90° BENDS	45° BENDS	22 1/2° BENDS	X
4" &6"	2.2	3.0	1.7	0.9	TO BE A MINIMUM OF 18"
8"	3.8	5.4	2.9	1.5	
10"	5.9	8.4	4.6	2.3	
12"	8.5	12.0	6.5	3.4	

NOTES:

1. THRUST BLOCKS SHALL BE PLACED OR FORMED IN SUCH POSITION THAT ALL BOLTS REMAIN ACCESSIBLE.
2. ALL BLOCKING SHALL BE PLACED AGAINST UNDISTURBED FIRM TRENCH WALL.
3. BLOCKING AREAS SHOWN ABOVE ARE BASED ON 150 PSI PIPE PRESSURE AND MINIMUM SOIL BEARING OF 2000#/S.F.
4. ALL FITTINGS TO BE MJ UNLESS OTHERWISE NOTED. ALL VERTICAL BENDS TO BE RESTRAINED W/RETAINER GLANDS. HORIZONTAL FITTINGS TO BE RESTRAINED AS NEEDED PER ENGINEER OR INSPECTOR.

DIMENSIONS OF CONCRETE FOR THRUST BLOCKS AT FITTINGS

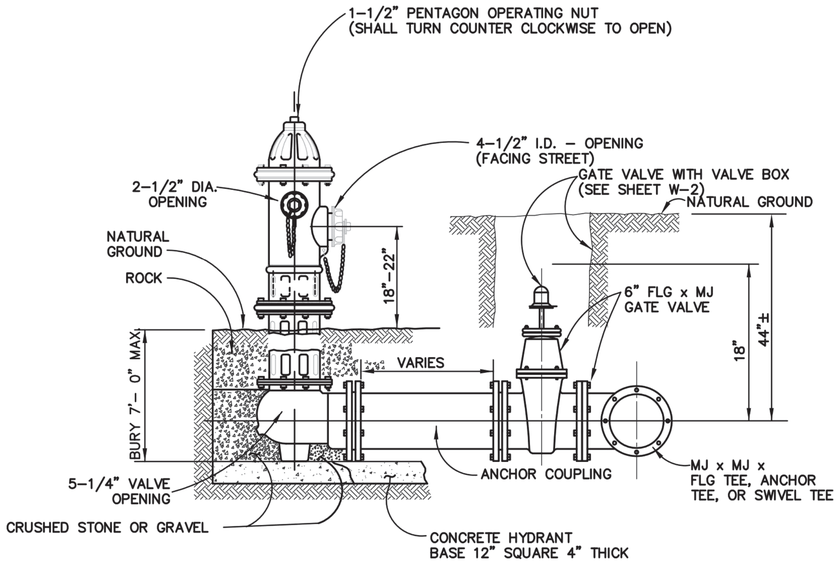
N.T.S.

GATE VALVE, BLOCKING, MARKER, & LOWERING DETAILS

CITY OF MANSFIELD

STANDARD CONSTRUCTION DETAILS

WATER	DATE: NOV. 2014	SHEET NO. W-2

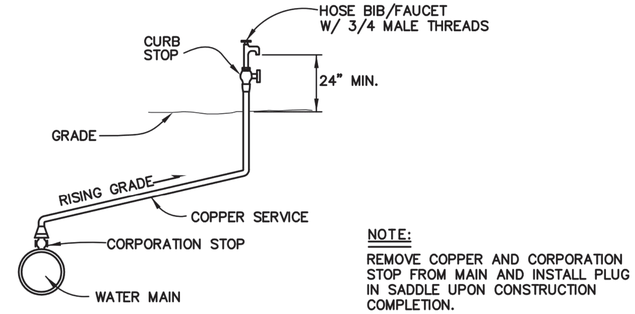


STANDARD FIRE HYDRANT DETAIL

N.T.S.

FIRE HYDRANT NOTES:

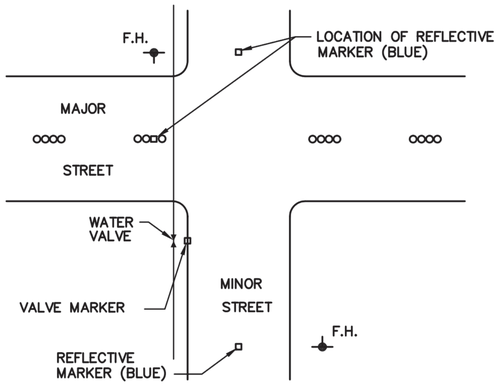
1. CENTER OF F.H. BARREL SHALL BE NOT LESS THAN 2.5' OR MORE THAN 3.5' FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE APPROVED BY THE ENGINEERING DEPARTMENT.
2. ON PRIVATE CONTRACTS, THE DEVELOPER'S ENGINEER WILL STAKE F.H. HORIZONTAL LOCATION AND FLANGE ELEVATION.
3. FIRE HYDRANTS SHALL BE INSTALLED PRIMED ONLY, PAINTED AFTER INSTALLATION.
4. FIRE HYDRANTS SHALL BE COATED WITH HYDRANT HYDE, FLYNT, OR TENEMEC BRAND PAINTS. THE COLOR SHALL BE ALUMINUM.
5. HYDRANT LEADS OR FIRE LINES IN EXCESS OF 200' REQUIRE DOUBLE–CHECK ASSEMBLY AT MAIN (SEE SHEET W–6).
6. ALL HYDRANT EXTENSIONS SHALL HAVE BREAKAWAY FLANGE AND STEM COUPLING.
7. BLOCKING OF FIRE HYDRANT SHALL BE REQUIRED FOR EXTENSIONS ACROSS STREETS FROM MAINS OF LEADS LONGER THAN ONE JOINT OF PIPE. LAST JOINT OF PIPE CONNECTING TO HYDRANT MUST BE A FULL JOINT.
8. LOWER BARREL ON FIRE HYDRANT SHALL NOT EXCEED 7'–0". IF NECESSARY, RETAINED BENDS MAY BE USED TO ACHIEVE GRADE NEEDED WITHOUT EXCEEDING 7'–0" LOWER BARREL HEIGHT. ALL PIPING TO BE DUCTILE IRON.
9. PIPE WITH RETAINER GLANDS WILL ONLY BE PERMITTED FOR LEADS THAT EXCEED 36".



NOTE:
REMOVE COPPER AND CORPORATION STOP FROM MAIN AND INSTALL PLUG IN SADDLE UPON CONSTRUCTION COMPLETION.

TEMPORARY FLUSH VALVE/SAMPLE POINT

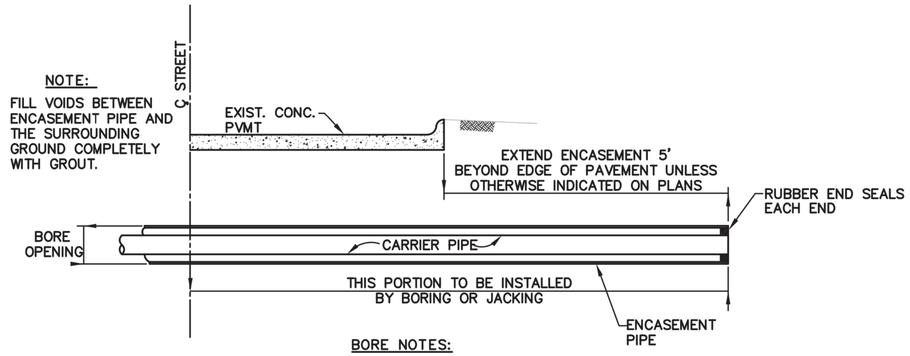
N.T.S.



WATER APPURTENANCE MARKERS

NOTES:

1. EACH WATER SYSTEM VALVE LOCATED ADJACENT TO OR IN A CITY STREET SHALL RECEIVE A MARKER PLACED ON THE CURB AS CLOSE AS POSSIBLE TO THE VALVE. VALVES TO BE MARKED BY SAWING A "V" IN FACE OF CURB ADJACENT TO VALVE BOX. VALVES NOT IN STREET MARKED WITH UPSIDE–DOWN "V".
2. EACH LOCATION OF A FIRE HYDRANT SHALL RECEIVE A BLUE REFLECTORIZED MARKER LOCATED IN THE CENTER OF ANY STREET TO WHICH IT IS ADJACENT (2 FOR HYDRANTS ON STREET CORNERS).
3. ALL BLUE FIRE HYDRANT MARKERS SHALL BE A CUBE CORNER TYPE REFLEX REFLECTOR MOLDED OF OPTIC GRADE PLASTIC, WITH A HOUSING OF HIGH IMPACT ABS PLASTIC, WITH A FILLER OF INERT THERMOSETTING RESINS. APEX UNIVERSAL, INC. TYPE: BB TWO WAY BLUE.



BORE NOTES:

1. ALL BORES SHALL BE CASED. (TYP. 2 NOMINAL SIZES LARGER THAN CARRIER).
2. CASING PIPE SHALL BE COATED INSIDE AND OUTSIDE WITH BITUMINOUS COATING.
3. VOIDS OUTSIDE OF CASING PIPES SHALL BE GROUT FILLED.
4. SEE SHEET MS–2 FOR APPROVED SPACERS.
5. SPACERS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATION.

BORE DETAIL

N.T.S.

FIRE HYDRANT, TEMPORARY FLUSH VALVE, & BORE DETAILS

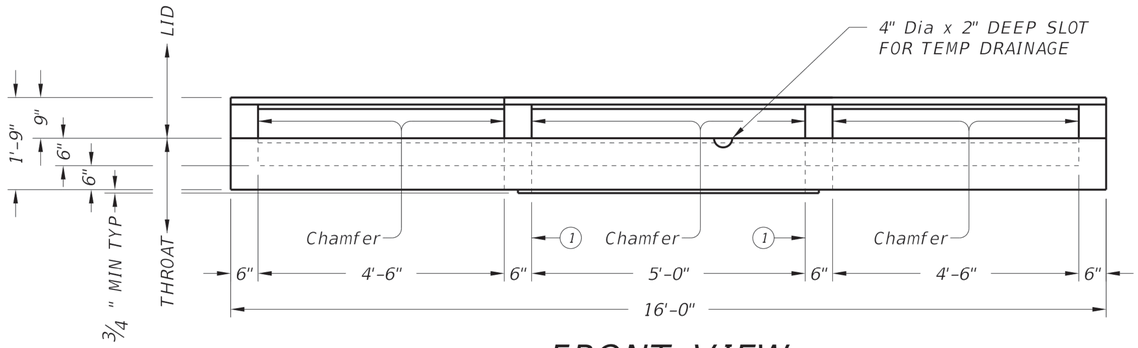
CITY OF MANSFIELD

STANDARD CONSTRUCTION DETAILS

WATER	DATE: NOV. 2014	SHEET NO. W–4

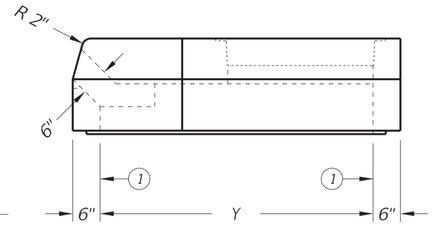
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DATE:
FILE:



FRONT VIEW

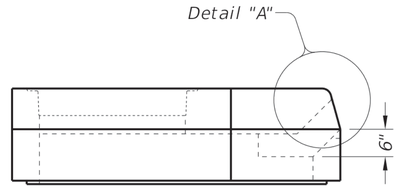
(SHOWING LEFT AND RIGHT EXTENSIONS)



RIGHT VIEW

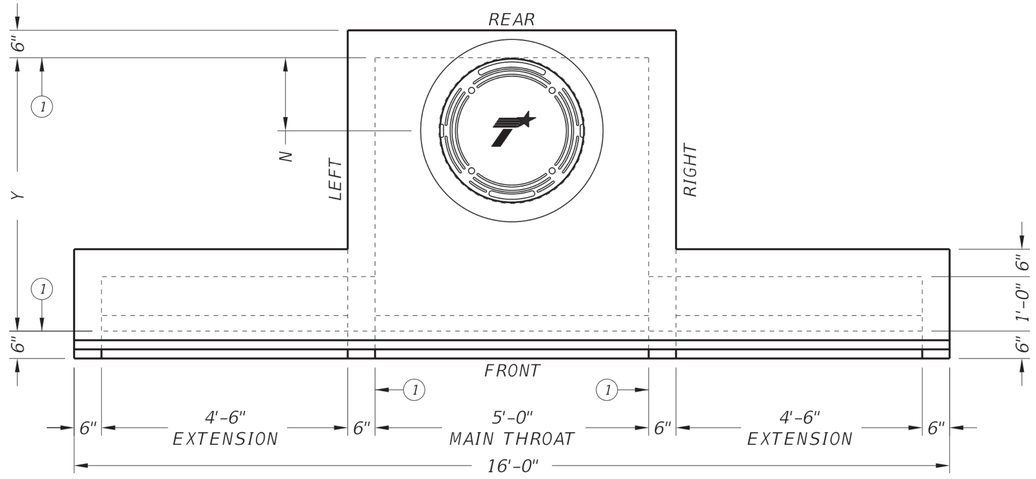
REAR VIEW

(EXTENSIONS NOT SHOWN)



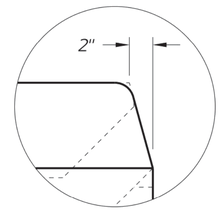
LEFT VIEW

(1) Matches inside face of wall of precast base or riser below inlet.



PLAN VIEW

(SHOWING LEFT AND RIGHT EXTENSIONS)



DETAIL "A"

HS20 LOADING

Texas Department of Transportation

Bridge Division Standard

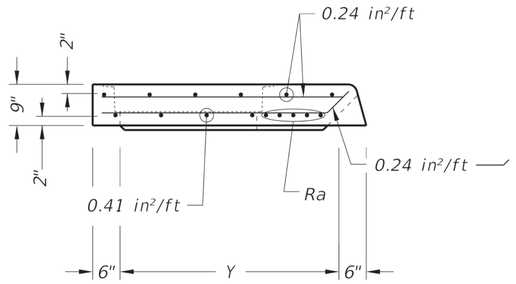
PRECAST CURB INLET OUTSIDE ROADWAY

PCO

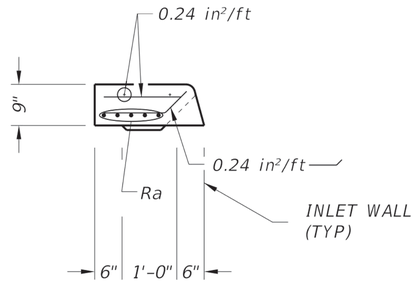
FILE: prestd03.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

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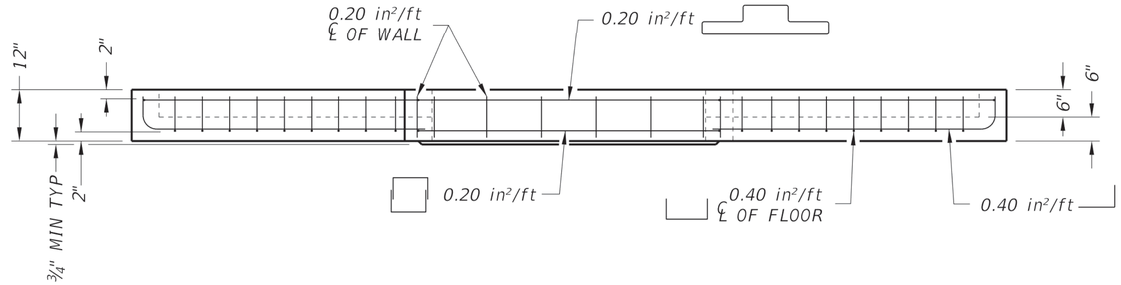
DATE:
FILE:



LID SECTION A-A

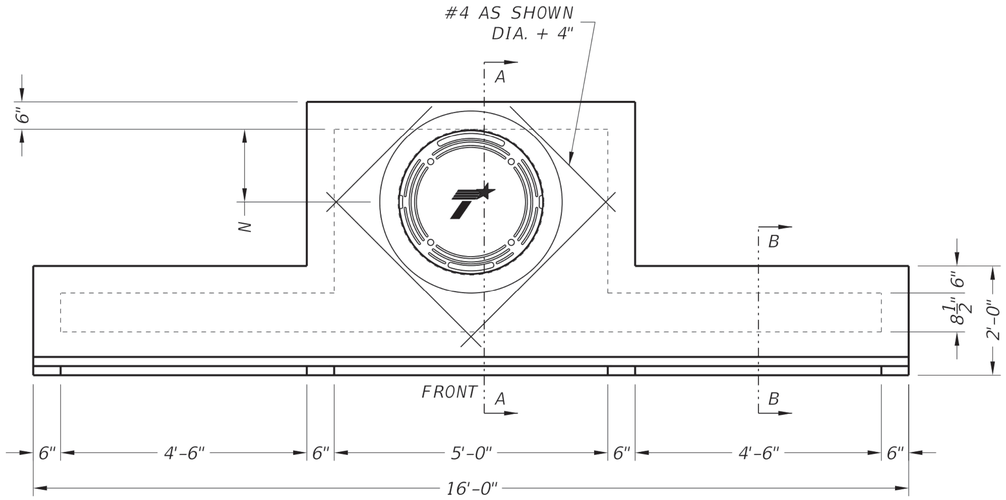


LID SECTION B-B



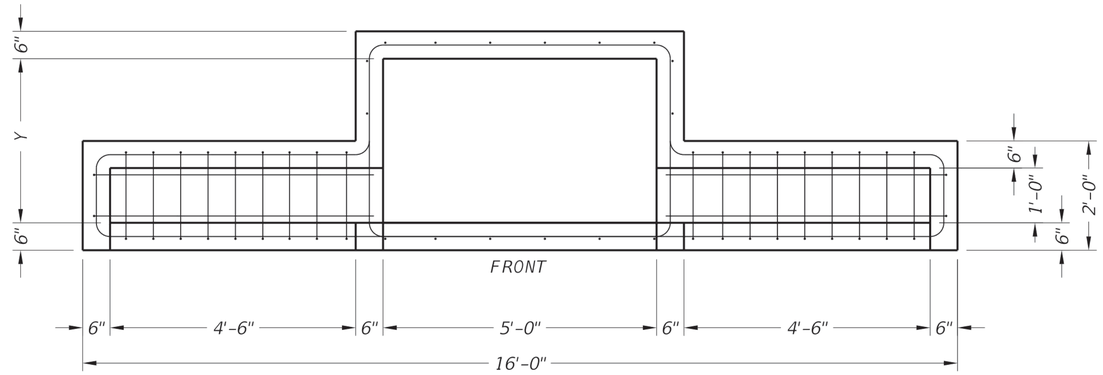
THROAT ELEVATION VIEW

(SHOWING LEFT AND RIGHT EXTENSIONS)



LID PLAN VIEW

(SHOWING LEFT AND RIGHT EXTENSIONS)



THROAT PLAN VIEW

(SHOWING LEFT AND RIGHT EXTENSIONS)

SIZE(Y)	N	MH DIA*	Ra
3'	9"	18"	(4) #5 Additional
4'	16"	32"	(4) #5 Additional
5'	16"	32"	(4) #5 Additional
6'	16"	32"	(4) #5 Additional

* Nominal ring and cover size.

FABRICATION NOTES:

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Extensions may be right, left, both or none. Provide extensions as specified elsewhere in the plans.
4. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is ¾". Lid may employ a butt joint with dowels at the Contractor's option.
5. Provide lifting devices in conformance with Manufacturer's recommendations.
6. Provide cast iron solid cover, unless noted otherwise elsewhere in the plans.
7. Chamfer vertical edges of inlet lid ¾" as shown in Front View, sheet 1.

INSTALLATION NOTES:

1. Inlet throat and lid are not intended for direct traffic. Do not place in roadway.
2. Seal tongue and groove joints and butt joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or ½ the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.

GENERAL NOTES:

1. Designed according to ASTM C913.
2. Open area of main throat = 360 sq in. Open area of one extension throat = 324 sq in.
3. Payment for inlet is per Item 465, "Junction Boxes, Manholes, and Inlets" by type, size, and extension placement. Extensions are subsidiary to inlet.

Cover dimensions are clear dimensions, unless noted otherwise.

HS20 LOADING SHEET 2 OF 2

Texas Department of Transportation

Bridge Division Standard

PRECAST CURB INLET OUTSIDE ROADWAY

PCO

FILE: prestd03.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

TRACT III
HOTT FAMILY
LIMITED PARTNERSHIP
INST#
D209316707
D.R.T.C.T.

CITY OF
MANSFIELD
INST#
D213125824
D.R.T.C.T.

SIGN STOP

SIGN SPEED 40

SIGN TRAFFIC

EG SETTINGS

NATIONAL PARKWAY
90' WIDE PUBLIC RIGHT OF WAY

CONCRETE PAVEMENT

SIGN TRAFFIC

SIGN SPEED 40

SIGN BIKE

PERMANENT UTILITY EASEMENT
INST# D213125823 D.R.T.C.T.

FUTURE TREES

CATV VAULT

ETRAN

LOT 1

LOT 2

ASPHALT PAVEMENT

TOP OF CURB

EDGE OF PAVEMENT

TRACT IV
HOTT FAMILY
LIMITED PARTNERSHIP
INST#
D209316707
D.R.T.C.T.
2.624 ACRES
114,284
SQUARE FEET

ARTIFICAL LOT LINE

PROPOSED METAL FENCE

10' UTILITY ESMT.

GARDEN HEIGHTS
PHASE THREE,
SECTION 1
INST#
D213250013
P.R.T.C.T.
LOT 3

EX. WOOD FENCE TO REMAIN

UTILITY AND DRAINAGE EASEMENT INST# D202277736 D.R.T.C.T.

HOLLAND ROAD

PROPOSED 6' WOOD FENCE TO MATCH EXISTING

LOT 1, BLOCK 14
GARDEN HEIGHTS,
PHASE THREE ADDITION
CABINET A,
SLIDE 12105
P.R.T.C.T.

Plant	Qty
CO	1
NP	12
CON	86
CO	6
DR	15
GL	50
CE	1
DR	15
GL	50
CE	1
DR	19
CE	1
GL	30
PLY	17
CON	104
LO	4
RV	5
MFG	176
VT	6
CON	148
PLY	14
GSN	33
DB	25
NP	13
CON	16
NRS	3
LO	2
RO	4
LO	4
CE	1
CE	1
LO	3
RO	1
RO	2
RO	2

0 20 75
10 50

north

scale: 1" = 20'-0"

Leeming Design Group
Landscape Architecture
4913 Rufe Snow Drive, Suite 101-B North Richland Hills, Texas 76180
(817) 577-0889 Fax (817) 577-0896 leemingdesigngroup@sbcglobal.net

REGISTERED LANDSCAPE ARCHITECT
WILLIAM H. LEEMING
STATE OF TEXAS

No.	Description	Date
	REVISIONS	

KOMATSU
ARCHITECTURE

FINAL DESIGN

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

LANDSCAPE SITE PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	L.01

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ADDITIONAL CITY NOTES:

1. GRADE CHANGES NOT ALLOWED WITHIN LIMITS OF CRITICAL ROOT ZONE OF PROTECTED TREES.
2. NO ASPHALT, CONCRETE OR OTHER IMPERVIOUS PAVING MATERIALS MAY BE PLACED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF EX. TREES.
3. ALL ROOTS 2" OR LARGER IN DIAMETER WHICH ARE EXPOSED AS RESULT OF TRENCHING OR OTHER EXCAVATION SHALL BE CUT OFF SQUARE WITH SHARP MEDIUM-TOOTH SAW AND COVERED WITH PRUNING COMPOUND WITHIN 2 HRS OF INITIAL EXPOSURE.
4. NO CONSTRUCTION OR WASTE MATERIALS WILL BE ALLOWED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF A PROTECTED TREE.
5. NO EQUIPMENT MAY BE CLEANED OR OTHER LIQUIDS DEPOSITED OR ALLOWED TO FLOW OVERLAND WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF EXISTING TREE. THIS INCLUDES, WITHOUT LIMITATION, PAINT, OIL, SOLVENTS, ASPHALT, CONCRETE, MORTAR, OR SIMILIAR MATERIALS.
6. NO PARKING AND NO VEHICULAR/CONSTRUCTION EQUIP. TRAFFIC ARE ALLOWED WITHIN THE LIMITS OF THE CRITICAL ROOT ZONE OF ANY PROTECTED TREE.
7. APPROVALOF THE FINAL INSPECTION OF THE DEVELOPMENT WILL BE CONTINGENT ON COMPLIANCE WITH THE ABOVE AND ALL APPLICABLE REQUIREMENTS OF THE CITY OF MANSFIELD.

INTERIOR PARKING LOT LANDSCAPE SUMMARY

# OF REQUIRED PARKING SPACES	-
# OF PROVIDED PARKING SPACES	26
# OF TREE ISLANDS PROVIDED	7
# OF PARKING TREES PROVIDED	5

INTERIOR LANDSCAPE SUMMARY CHART

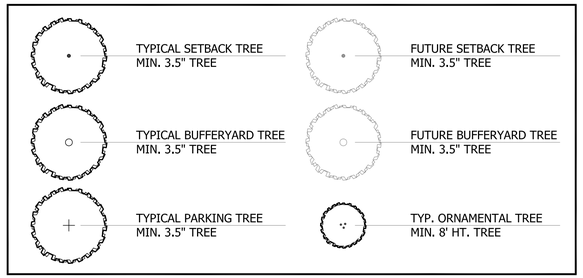
(DOES NOT INCLUDE PERIMETER AND INTERIOR PARKING LANDSCAPE)

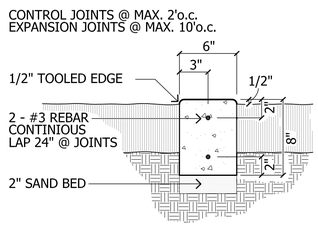
	LANDSCAPE AREA (IN SQ. FT.)	% OF LANDSCAPE AREA	CANOPY TREES	ACCENT TREES	SHRUBS	GROUND COVER
REQUIRED	8,243 SF	10%	-	0	0	0
PROVIDED	19,668 SF	23.86%		6		

BUFFERYARD and SETBACK SCHEDULE

LOCATION		LENGTH	BUFFERYARD-WIDTH TYPE	CANOPY TREES	ACCENT TREES	SHRUBS	FENCE and SCREENING HEIGHT and MATERIAL
NORTH (TOTAL SITE)	REQUIRED	488'	SETBACK	13	0	0	NONE
	PROVIDED		SETBACK	13	0	0	NONE
NORTH (ARTIFICAL LOT)	REQUIRED	269'	SETBACK	7	0	0	NONE
	PROVIDED		SETBACK	7	0	0	NONE
EAST	REQUIRED	256'	BY10	10	0	0	WF6
	PROVIDED		BY10	10	0	0	WF6
SOUTH (TOTAL SITE)	REQUIRED	515	BY10	21	0	0	WF6
	PROVIDED		BY10	21	0	0	WF6
SOUTH (ARTIFICAL LOT)	REQUIRED	295'	BY10	12	0	0	WF6
	PROVIDED		BY10	12	0	0	WF6
WEST	REQUIRED	250'	SETBACK	7	0	0	NONE
	PROVIDED		SETBACK	7	0	0	NONE

TREE LEGEND





CONC. EDGE DETAIL

SCALE: 1 1/2" = 1'-00"

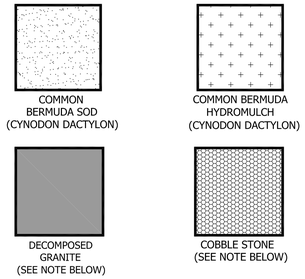
PLANTLIST

SYM	MATERIAL	QNTY	SIZE	HT	SP	NOTES	SPACING
LO	LIVE OAK QUERCUS VIRGINIANA	13	3.5" CAL.	10-12'	5-6'	NURSERY GROWN	
RO	LIVE OAK QUERCUS VIRGINIANA	9	3.5" CAL.	10-12'	5-6'	NURSERY GROWN	
CO	CHINKAPIN OAK QUERCUS MUHLENBERGIA	7	3.5" CAL.	10-12'	5-6'	NURSERY GROWN	
CE	CEDAR ELM ULMUS CRASSIFOLIA	5	3.5" CAL.	10-12'	6-7'	NURSERY GROWN	
VT	VITEX VITEX AGNUS-CASTUS	6	30 GAL.	8-10'	4-5'	CONTAINER GROWN	
NR	N.R. STEVENS HOLLY ILEX x 'NELLIE R. STEVENS'	3	7 GAL.	42"	24"	FULL	4'oc
NP	NEEDLEPOINT HOLLY ILEX CORNUTA 'NEEDLEPOINT'	25	5 GAL.	26"	18"	FULL	36"oc
RY	RED YUCCA HESPERALOE PARVIFOLIA	5	5 GAL.	15"	20"	FULL	36"oc
PLY	PALE LEAF YUCCA YUCCA PALLIDA	31	5 GAL.	12"	15"	FULL	30"oc
DB	DWF BURFORD HOLLY ILEX CORNUTA 'BURFORDI' NANA	25	5 GAL.	15"	15"	FULL	30"oc
DR	DRIFT ROSE ROSA 'PEACH DRIFT ROSE'	49	3 GAL.	12"	12"	FULL	30"oc
GSN	GULFSTREAM NANDINA NANDINA DOMESTICA 'GULF STREAM'	33	3 GAL.	12"	12"	FULL	24"oc
MFG	MEX. FEATHERGRASS NASSELLA TENUISSIMA	176	1 GAL.	12"	10"	FULL	18"oc
GL	GREEN LIRIOPE LIRIOPE MUSCARI	130	1 GAL.	10"	10"	FULL	18"oc
CON	CONCRETE EDGE	354	LIN. FT.	REF. DETAIL THIS SHEET			

LANDSCAPE NOTES

1. PLANT LIST FOR SHEET L.01.
2. PLANT LIST TO BE USED AS AIDE TO BIDDER ONLY. LANDSCAPE CONTRACTOR TO VERIFY ALL QUANTITIES.
3. ALL BEDS SHALL BE ACCEPTED AT ROUGH FINISH GRADE. IF ANY EXISTING VEGETATION IS EVIDENT, LANDSCAPE CONTRACTOR SHALL SPRAY AREA WITH BROAD SPECTRUM HERBICIDE APPLICATION TO REMOVE ANY VEGETATION.
4. AFTER APPROPIATE TIME TO ENSURE A VEGETATION IS DEAD, TILL SUBGRADE AND RAKE SMOOTH, REMOVING ALL DEAD VEGETATION, STONES, CLODS AND DEBRIS.
5. AFTER INSTALLATION OF STEEL EDGING, ALL BEDS SHALL BE TILLED TO A DEPTH OF 4-6", RAKING OUT ALL DEAD VEGETATION.
6. APPLY A 2-3" DEPTH OF ORGANIC MATERIAL OVER ENTIRE BED AND TILL INTO EXISTING SOIL. ORGANIC MATERIAL SHALL BE ONE OF FOLLOWING:
   - VITAL EARTH COMPOST
   - BACK-TO-EARTH SOIL CONDITIONER
   - LIVING EARTH COMPOST
   - SOIL BUILDING SYSTEMS COMPOST
   - SILVER CREEK MATERIALS COMPOST
7. TOPDRESS ENTIRE BED WITH MINIMUM 2" DEPTH SHREDDED NATIVE CEDAR MULCH.
8. ALL SHADE TREES AND ORNAMENTAL TREES SHALL BE PLANTED AS PER DETAILS ON THIS SHEET.
9. ALL LANDSCAPE AREAS SHALL BE WATERED WITH AUTOMATIC IRRIGATION SYSTEM, COMPLETE WITH FREEZE SENSOR, RAIN STAT, AND CONTROLLER. SYSTEM SHALL BE DESIGNED TO UTILIZE WATER-SAVING TECHNIQUES AND EQUIPMENT. INSTALLATION OF SYSTEM SHALL BE MADE BY A FIRM DULY LICENSED UNDER ARTICLE NO. 8751 VTCS (LICENSED IRRIGATORS ACT), S.B. NO. 259.

LANDSCAPE LEGEND



SOD INSTALLATION NOTES:

a. ALL SUBGRADE SHALL BE ACCEPTED AT ROUGH FINISH GRADE. IF ANY EXISTING VEGETATION IS EVIDENT, LANDSCAPE CONTRACTOR SHALL SPRAY AREA WITH BROAD SPECTRUM HERBICIDE APPLICATION TO REMOVE ANY VEGETATION.
b. AFTER APPROPIATE TIME TO ENSURE A VEGETATION IS DEAD, TILL SUBGRADE AND RAKE SMOOTH, REMOVING ALL DEAD VEGETATION, STONES, CLODS AND DEBRIS.
c. SOD SHALL BE VIGOROUS, WELL-ROOTED AND SHALL BE DELIVERED AT A UNIFORM SOIL THICKNESS.
d. SOD SHALL BE LAID WITH ALTERNATING JOINTS.
e. ALL SOD SHALL BE ROLLED TO CONSISTENT SURFACE, FILLING JOINTS WITH COARSE SAND AS REQUIRED.

HYDROMULCH INSTALLATION NOTES:

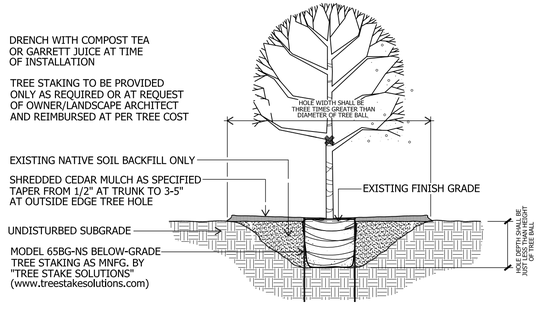
a. ALL SUBGRADE SHALL BE ACCEPTED AT ROUGH FINISH GRADE. IF ANY EXISTING VEGETATION IS EVIDENT, LANDSCAPE CONTRACTOR SHALL SPRAY AREA WITH BROAD SPECTRUM HERBICIDE APPLICATION TO REMOVE ANY VEGETATION.
b. AFTER APPROPIATE TIME TO ENSURE A VEGETATION IS DEAD, TILL SUBGRADE AND RAKE SMOOTH, REMOVING ALL DEAD VEGETATION, STONES, CLODS AND DEBRIS.
c. SEED SHALL BE HULLED, TREATED LAWN-TYPE SEED, DELIVERED TO SITE IN ORIGINAL SEALED CONTAINERS. MINIMUM PURITY GERMINATION SHALL BE 90%.
d. FERTILIZER SHALL BE COMPLETE FERTILIZER, DRT, FREE-FLOWING, AND BALANCED IN COMPOSITION, CONFORMING TO ALL STATE LAWS.
e. ALL HYDROMULCH AREAS SHALL BE WATERED BY TEMPORARY METHODS (AS APPROVED BY OWNER) UNTIL GERMINATION AND 3 MOWINGS.

DECOMPOSED GRANITE INSTALLATION NOTES:

a. LANDSCAPE CONTRACTOR SHALL INSPECT D.G. AREAS FOR ANY EXISTING VEGETATION AND PROVIDE BROAD SPECTRUM HERBICIDE APPLICATION TO REMOVE ANY VEGETATION.
b. AFTER APPROPIATE TIME TO ENSURE A VEGETATION IS DEAD, TILL SUBGRADE AND RAKE SMOOTH, REMOVING ALL DEAD VEGETATION.
c. TILL TOP 1" OF SUBGRADE AND COMPACT TO 95% STANDARD PROCTOR WITH DRUM OR AUTOMATIC HAND TAMPERS. CROWN
d. INSTALL FILTER FABRIC OVER ENTIRE AREA TO RECIEVE GRANITE.
e. PLACE FOUR (4) INCHES OF DECOMPOSED GRANITE WITH "STABILIZER BINDER OVER A DRY SUB-BASE, INSTALLING IN 1" LIFTS, COMPACTED WITH AUTOMATIC HAND TAMPER.
f. CONTRACTOR SHALL PROVIDE FIVE (5) 50 lbs. BAGS OF PRE-MIXED DECOMPOSED GRANITE FOR FUTURE MAINTENANCE USES.

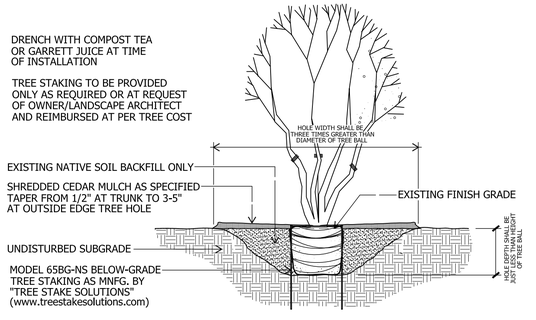
COBBLESTONE INSTALLATION NOTES:

a. LANDSCAPE CONTRACTOR SHALL INSPECT COBBLESTONE AREAS FOR ANY EXISTING VEGETATION AND PROVIDE BROAD SPECTRUM HERBICIDE APPLICATION TO REMOVE ANY VEGETATION.
b. AFTER APPROPIATE TIME TO ENSURE A VEGETATION IS DEAD, TILL SUBGRADE AND RAKE SMOOTH, REMOVING ALL DEAD VEGETATION.
b. INSTALL FILTER FABRIC OVER ENTIRE AREA TO RECIEVE COBBLE.
c. PLACE MINIMUM FOUR (4) INCHES OF NEW MEXICO MEDIUM COBBLE IN DESIGNATED AREAS.



TREE PLANTING

SHADE TREE - 3" CAL. and smaller
not to scale



TREE PLANTING

TYPICAL MULTI-TRUNK TREE
not to scale

LANDSCAPE MAINTENANCE

THE PROPERTY OWNER, TENANT OR AGENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL REQUIRED LANDSCAPING IN A HEALTHY, NEAT, ORDERLY AND LIVE-GROWING CONDITION AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, IRRIGATION, WEEDING, AND OTHER SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF THE LANDSCAPING. LANDSCAPED AREAS SHALL BE KEEP FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIALS NOT A PART OF THE LANDSCAPE. PLANT MATERIALS THAT DIE SHALL BE REPLACED WITH PLANT MATERIALS OF SIMILIAR VARIETY AND SIZE.

Leeming Design Group
Landscape Architecture
4913 Rufe Snow Drive, Suite 101-B North Richland Hills, Texas 76180
(817) 577-0889 Fax (817) 577-0896 leemingdesigngroup@sbcglobal.net

REGISTERED LANDSCAPE ARCHITECT — WILLIAM H. LEEMING III — U.S.A. — 1178

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

FINAL DESIGN

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

LANDSCAPE NOTES and DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	L.02

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IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISION ON ENVIRONMENTAL QUALITY (TCEQ) (MC-178) P.O. BOX 13087 T.C.E.Q.'S WEB SITE IS: WWW.TCEQ.STATE.TX.US

EPA WaterSense PARTNER

NATIONAL PARKWAY
90' WIDE PUBLIC RIGHT OF WAY

1 1/2" WATER METER

EXTEND "TWO-WIRE" PATH AND CAP MAINLINE FOR FUTURE EXPANSION

1 1/2" RP DEVICE
1 1/2" MASTER VALVE

400 L.F.

CATV VAULT

ETRAN

LOT 1

LOT 2

800 L.F.

CONTROLLER

GARDEN HEIGHTS PHASE THREE, SECTION 1 INST# D213250013 P.R.T.C.T. LOT 3

LOT 1, BLOCK 14 GARDEN HEIGHTS, PHASE THREE ADDITION CABINET A, SLIDE 12105 P.R.T.C.T.

EXTEND "TWO-WIRE" PATH AND CAP MAINLINE FOR FUTURE EXPANSION

POWER POLE

LEGEND

- HUNTER PROS-06-NSI-PRS30 SERIES POP UP SPRAY HEADS WITH HUNTER MSBN-50H STREAM BUBBLER NOZZLES. (TWO PER TREE) SEE INSTALLATION NOTE #13 REGARDING TREE BUBBLER LATERAL PIPE
- HUNTER PROS-04-PRS30 SERIES POP UP SPRAY HEAD WITH PRO SPRAY SERIES NOZZLE AS NOTED BELOW
- NETAFIM TECHLINE TLHCVXR5-12 SERIES DRIP TUBE IN SHRUB BED INSTALLED AT 2" DEPTH SEE INSTALLATION NOTE #16 REGARDING DRIP TUBE LAYOUT IN SHRUB BEDS.
- HUNTER PGP ULTRA, ADJUSTABLE ARC 4" POP UP ROTARY HEAD, PART CIRCLE, #4.0 BLUE NOZZLE UNLESS NOTED OTHERWISE
- HUNTER PGP ULTRA, ADJUSTABLE ARC 4" POP UP ROTARY HEAD, FULL CIRCLE, #8.0 BLUE NOZZLE UNLESS NOTED OTHERWISE
- HUNTER ICV SERIES ELECTRIC REMOTE CONTROL VALVE WITH DUAL-1 DECODER
- HUNTER ICV SERIES ELECTRIC REMOTE CONTROL, "TREE BUBBLER ZONE" VALVE WITH DUAL-1 DECODER SEE INSTALLATION NOTE #13 REGARDING TREE BUBBLER LATERAL PIPE
- NETAFIM LVCZ SERIES DRIP VALVE ASSEMBLY WITH 42 PSI REGULATOR AND 140 MESH FILTER WITH DUAL-1 DECODER
  USE MODEL LVCZS8010075-LF FOR DRIP ZONES WITH .25 TO 4 GPM FLOW RATE
  USE MODEL LVCZS8010075-HF FOR DRIP ZONES WITH 5 TO 12 GPM FLOW RATE
  USE MODEL LVCZ-150 FOR DRIP ZONES WITH 13 TO 35 GPM FLOW RATE
- LASCO "V101N" SERIES SCH. 80 PVC TRUE UNION BALL VALVE, MAINLINE SIZE
- HUNTER HQ-33-LRC-R QUICK COUPLING VALVE WITH LOCKING PURPLE COVER AND 3/4" PVC BALL VALVE
- WILKINS 375-B SERIES REDUCED PRESSURE TYPE BACKFLOW PREVENTOR INSTALLED PER CITY CODE
- IRRIGATION WATER METER AND TAP, SIZE AS NOTED ON THE PLAN
- HUNTER IC-600-M WITH DUAL48M "TWO-WIRE" CONTROLLER WITH WRFC WIRELESS RAIN / FREEZE SENSOR LOCATE SENSOR AS FIELD DIRECTED BY THE LANDSCAPE ARCHITECT

CLASS 200 PVC MAINLINE PIPE
CLASS 200 (EXCEPT 1/2 INCH #315) PVC LATERAL PIPE
(2) 4" CLASS 200 SLEEVE PIPES

L.I.C. SHALL SELECT PRO-SPRAY SPRAY NOZZLES FOR "HEAD-TO-HEAD" COVERAGE, ADJUSTED FOR NO OVERSPRAY ONTO WALLS AND WALKS. NO OVERSPRAY INTO STREETS IS PERMITTED.

north

scale: 1" = 20'-0"

James Pole
IRRIGATION CONSULTANTS
IRRIGATION DESIGN, CONSULTING, AND LANDSCAPE WATER MANAGEMENT
TEXAS L.I.C. #658
100 N. LOCUST ST., SUITE 3
DENTON, TEXAS 76201
PHONE: 940.243.2364
FAX: 940.382.2475
james@jamespoleirrigation.com

STATE OF TEXAS 658 LICENSED IRRIGATOR
10 / 10 / 2019

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

95% DESIGN SUBMITTAL

KARL A. KOMATSU
TX. ARCH REG # 6843

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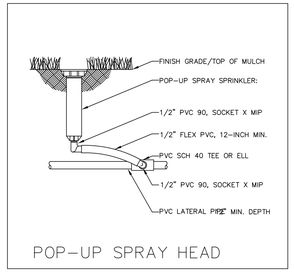
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MANSFIELD FIRE STATION NO. 5

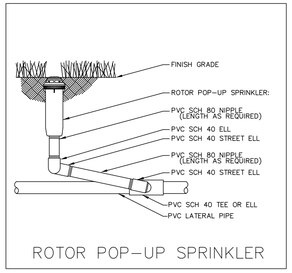
IRRIGATION PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	10/11/2019
SHEET:	IR.01

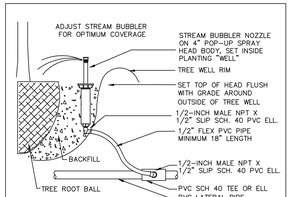
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POP-UP SPRAY HEAD

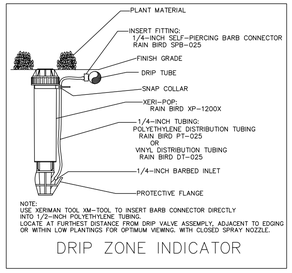


ROTOR POP-UP SPRINKLER

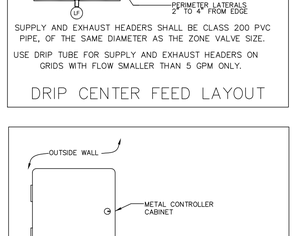


INCLUDE TWO BUBBLER HEADS, SET ON OPPOSITE SIDES OF ROOT BALL

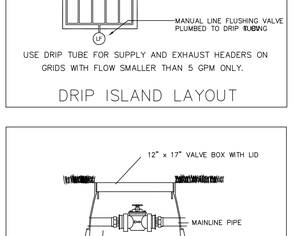
TREE BUBBLER



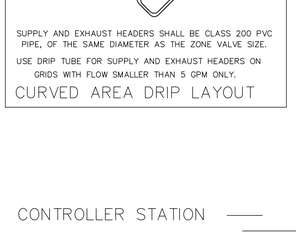
DRIP ZONE INDICATOR



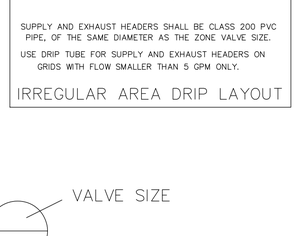
MANUAL LINE FLUSH VALVE



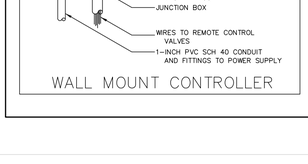
DRIP VALVE, FILTER, REGULATOR



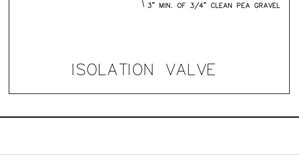
REMOTE CONTROL VALVE



QUICK COUPLER VALVE WITH PVC BALL VALVE



RP DEVICE WITH ENCLOSURE



NOTES:
1. ALL PVC IRRIGATION SLEEVES TO BE CLASS 200 PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24-INCHES MINIMUM ABOVE FINISH GRADE.
4. MECHANICALLY TAMP TO 95% PROCTOR.

SLEEVING

NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH CLASS 200 PVC TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS SEE SPECIFICATIONS.

TRENCH DETAIL



DRIP TUBE

SUPPLY AND EXHAUST HEADERS SHALL BE CLASS 200 PVC PIPE, OF THE SAME DIAMETER AS THE ZONE VALVE SIZE.

USE DRIP TUBE FOR SUPPLY AND EXHAUST HEADERS ON GRIDS WITH FLOW SMALLER THAN 5 GPM ONLY.

DRIP CENTER FEED LAYOUT

USE DRIP TUBE FOR SUPPLY AND EXHAUST HEADERS ON GRIDS WITH FLOW SMALLER THAN 5 GPM ONLY.

DRIP ISLAND LAYOUT

SUPPLY AND EXHAUST HEADERS SHALL BE CLASS 200 PVC PIPE, OF THE SAME DIAMETER AS THE ZONE VALVE SIZE.

USE DRIP TUBE FOR SUPPLY AND EXHAUST HEADERS ON GRIDS WITH FLOW SMALLER THAN 5 GPM ONLY.

CURVED AREA DRIP LAYOUT

SUPPLY AND EXHAUST HEADERS SHALL BE CLASS 200 PVC PIPE, OF THE SAME DIAMETER AS THE ZONE VALVE SIZE.

USE DRIP TUBE FOR SUPPLY AND EXHAUST HEADERS ON GRIDS WITH FLOW SMALLER THAN 5 GPM ONLY.

IRREGULAR AREA DRIP LAYOUT

WALL MOUNT CONTROLLER

ISOLATION VALVE

INSTALLATION NOTES

EPA WaterSense PARTNER

IRRIGATION IN TEXAS IS REGULATED BY THE TEXAS COMMISION ON ENVIRONMENTAL QUALITY (TCEQ) (MC-178) P.O. BOX 13087 T.C.E.Q.'S WEB SITE IS: WWW.TCEQ.STATE.TX.US

1. COORDINATE IRRIGATION INSTALLATION WITH PLANTING PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
2. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES, AND WILL SECURE ALL REQUIRED PERMITS. L.I.C. SHALL PAY ANY ASSOCIATED FEES UNLESS OTHERVISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES HEREIN AND SHALL BE ADDRESSED BEFORE ANY CONSTRUCTION BEGINS.
3. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN THE ROOT ZONE OF EXISTING TREES. HAND-DIG ONLY, WITHIN THE ROOT ZONES OF EXISTING TREES. NO ROOTS OVER 1" DIAMETER SHALL BE CUT. STAKE ALL PROPOSED TRENCH ROUTES NEAR EXISTING TREES FOR APPROVAL BY THE LANDSCAPE ARCHITECT BEFORE DIGGING BEGINS.
4. CONFIRM MINIMUM STATIC WATER PRESSURE OF 65 PSI AT THE HIGHEST ELEVATION OF THE SYSTEM LIMITS, AND MAXIMUM STATIC WATER PRESSURE OF 90 P.S.I. AT THE LOWEST ELEVATION OF THE SYSTEM LIMITS AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS OUTSIDE THE RANGE STATED ABOVE, DO NOT PROCEED UNTIL DIRECTED BY THE LANDSCAPE ARCHITECT.
5. LATERAL PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES. MAINLINE PIPE AND WIRES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES. NO MACHINE TRENCHING SHALL BE PERMITTED WITHIN EXISTING TREE ROOT ZONES. WHEN HAND - TRENCHING WITHIN EXISTING TREE ROOT ZONES, NO ROOTS LARGER THAN 1" DIAMETER SHALL BE CUT.
6. UNSLEEVED PIPES MAY BE SHOWN UNDER PAVEMENT FOR GRAPHIC CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPED AREAS.
7. ELECTRIC POWER SHALL BE PROVIDED WITHIN FIVE FEET OF CONTROLLER LOCATION BY GENERAL CONTRACTOR. L.I.C. TO PROVIDE FINAL HARD-WIRE TO CONTROLLER.
8. 24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE". WIRE SPLICES SHALL INCLUDE DBY CONNECTORS AS MANUFACTURED BY 3M COMPANY. ALL FIELD SPLICES SHALL BE LOCATED IN A ROUND VALVE BOX OF SUFFICIENT SIZE TO ALLOW INSPECTION.
9. VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS IF NEEDED, WITH 3 INCHES OF CLEAN PEA GRAVEL LOCATED BELOW THE VALVE. USE 12" x 17" RECTANGULAR VALVE BOXES WITH PURPLE LID FOR QUICK COUPLING VALVES, AND 10" ROUND BOXES FOR ELECTRIC VALVES UNLESS NOTED OTHERWISE.
10. USE RIGID SCH. 80 PVC SWING JOINT ASSEMBLIES TO CONNECT ALL ROTARY HEADS AND QUICK COUPLERS.
11. ALL SPRAY HEADS SHALL BE CONNECTED WITH A 12" MINIMUM LENGTH OF 1/2" FLEX PVC. THE FLEX PVC SHALL BE SOLVENT WELDED TO SCHEDULE 40 PVC FITTINGS WITH WELD-ON #795 SOLVENT AND #P-70 PRIMER.
12. PROVIDE ONE QUICK COUPLER KEY WITH SWIVEL HOSE ELL FOR EVERY SIX Q.C. VALVES. (MINIMUM ONE SET).
13. CONTRACTOR IS TO CONTACT APPROPRIATE AUTHORITIES AND LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
14. LATERAL PIPE TO TREE STREAM BUBBLER HEADS IS OMITTED FOR GRAPHIC CLARITY. CONNECT TREE BUBBLER HEADS TO VALVES AS SHOWN WITH CLASS 200 PVC PIPE SIZED TO ALLOW A MAXIMUM FLOW VELOCITY OF 5 FEET PER SECOND
15. THE PROPOSED LOCATIONS OF ALL ABOVE- GROUND EQUIPMENT INCLUDING BACKFLOW PREVENTORS, CONTROLLERS AND WEATHER SENSORS SHALL BE STAKED BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE BEFORE THESE ITEMS ARE INSTALLED.
16. ALL HEADS SHALL BE INSTALLED A MINIMUM OF 4" FROM PAVEMENT EDGES. (6" OR GREATER WHERE REQUIRED BY LOCAL CODE) FINAL HEAD ADJUSTMENTS BY THE CONTRACTOR SHALL INCLUDE THE ADDITION OF CHECK VALVES WHERE NEEDED TO PREVENT EXCESSIVE LOW HEAD DRAINAGE. THE CONTRACTOR SHALL BUDGET FOR, AND INSTALL CHECK VALVES FOR UP 10 % OF THE TOTAL NUMBER OF HEADS WHEN NEEDED, WITH NO ADDITIONAL COST TO THE OWNER.
17. WHERE SHOWN ON THE PLANS, MASS SHRUB / GROUNDCOVER BEDS SHALL INCLUDE NETAFIM TECHLINE TLHCVXR SERIES DRIP TUBE WITH PRE-INSTALLED .55 GPH DRIP EMITTERS AT 12" INTERVALS (TLHCVXR5-12), INSTALLED IN CENTER-FED GRIDS WITH ROWS SPACED 18" APART. INDIVIDUAL DRIP TUBE RUNS SHALL NOT EXCEED 150 L.F. PVC LATERAL "TRUNK" LINES SHALL BE INSTALLED 10" DEEP. DRIP TUBE SHALL BE SET 2" BELOW FINISHED SOIL GRADE (NOT INCLUDING MULCH LAYER), SECURELY STAKED EVERY 18". NETAFIM #TL050MFV-1 FLUSH VALVES SHALL BE INSTALLED AT THE FARTHEST POINTS FROM THE ZONE VALVE. USE 17 MM BARBED FITTINGS FOR DRIP LINE CONNECTIONS, SET THE MAXIMUM OPERATING PRESSURE AT 30 PSI. TECHLINE HCVXR SHALL BE INSTALLED PERPENDICULAR TO SLOPE FACE. INSTALL TLCV IN-LINE CHECK VALVES FOR EVERY 8 FEET OF DRIP LINE ELEVATION CHANGE WITHIN THE ZONE. USE NETAFIM STAPLES (#TLS6) TO SECURE TUBING EVERY 18" EACH DRIP ZONE SHALL INCLUDE ONE MAINTENANCE "FLAG" WHICH SHALL CONSIST OF A 12" POP-UP SPRAY HEAD AND COMPLETELY CLOSED SPRAY NOZZLE. THE POP-UP HEAD SHALL BE CONNECTED TO THE DRIP ZONE PIPE, SET FLUSH WITH GRADE, AND LOCATED AT THE FARTHERST DISTANCE FROM THE DRIP VALVE ASSEMBLY. INSTALL THE "FLAG" HEAD ADJACENT TO EDGING OR IN LOW PLANTINGS FOR EASE OF VIEWING.

HUNTER "TWO WIRE" DECODER CONTROL WIRE INSTALLATION

THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR "TWO-WIRE" INSTALLATION.
"TWO-WIRE" PATH CONTROL WIRES SHALL BE HUNTER #D1GRY.
24 VOLT VALVE WIRE SHALL BE A MINIMUM OF #14 GAUGE, U.F. APPROVED FOR DIRECT BURIAL, SINGLE CONDUCTOR "IRRIGATION WIRE".
ALL WIRE SPLICES MUST BE MADE IN A VALVE BOX WITH DBR-6 OR EQUAL DIRECT-BURIAL WATERPROOF CONNECTORS.
ALL CONNECTIONS IN THE TWO-WIRE PATHS (OUTSIDE THE CONTROLLER ENCLOSURE) SHALL BE MADE WITH 3M DBR-6 WATERPROOF, STRAIN-RELIEVING DIRECT BURIAL CONNECTORS, OR EXACT EQUALS.
18 AWG/1MM DIA. WIRE OR LARGER SHALL BE USED FOR ALL DECODER-TO-SOLENOID CONNECTIONS. IN HIGH LIGHTNING AREAS THIS WIRE SHALL BE TWISTED TO MAXIMIZE SURGE SUPPRESSION.
THE INSTALLER SHALL PROVIDE ADEQUATE EARTH GROUND (NOT TO EXCEED 10 OHMS, OR IN COMPLIANCE WITH PRACTICES AS DEFINED IN AMERICAN SOCIETY OF IRRIGATION CONSULTANTS EARTH GROUNDING GUIDELINE 100-2002, AVAILABLE AT WWW.ASIC.ORG) AND CONNECT IT TO ONE OF THE DECODER GROUND LEADS EVERY 1000 FT.(330M), OR EVERY 12TH DECODER MODULE, WHICHEVER IS SHORTER. MINIMUM GROUND HARDWARE SHALL BE A 4" X 36" (100 X 915MM) COPPER PLATE WITH AT LEAST 10AWG/2.5MM DIA. COPPER WIRE. IN HIGH LIGHTNING AREAS, GROUNDING MAY BE INCREASED TO EVERY 500 FT./150M OR EVERY DRCODERS. GROUND CONNECTIONS FROM DECODER GROUND LEAD TO GROUNDING HARDWARE SHALL BE MADE BY JOINING THE 12AWG (2MM DIA.) DECODER GROUND WIRE WITH A 10AWG (2.5MM DIA.) SOLID COPPER LEAD IN AN APPROVED WIRE NUT OF APPROPRIATE SIZE, INSERTED IN A DBR-6 WATERPROOF DIRECT BURIAL CONNECTOR, OR WITH AN APPROVED WIRE CLAMP. GROUND HARDWARE SHALL EXTEND AT RIGHT ANGLES FROM THE TWO-WIRE RED/BLUE PATH, AND GROUND HARDWARE SHALL BE LOCATED AT LEAST 6FT./2M AWAY FROM THE TWO-WIRE PATH.
ANY SENSOR DECODER SHALL HAVE A BARE GROUND WIRE FOR CONNECTION TO EARTH GROUND, IN ACCORDANCE WITH SPECIFICATIONS APPLYING TO ALL OTHER DECODERS. ANY SENSOR DECODER SHALL COUNT AS A "DECODER" FOR GROUND SPACING PURPOSES.
PROVIDE EARTH GROUND / SURGE PROTECTION AT EVERY FIVE DECODERS.

scale: 1" = 20'-0"

James Pole
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james@jamespoleirrigation.com

STATE OF TEXAS LICENSED IRRIGATOR 658
10 / 10 / 2019

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

95% DESIGN SUBMITTAL

KARL A. KOMATSU
TX. ARCH REG # 6843

SEALS AFFIXED ONLY TO OFFICAL COPIES

THESE DRAWINGS ARE NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTURCTION.

MANSFIELD FIRE STATION NO. 5

IRRIGATION PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	10/11/2019
SHEET:	IR.02

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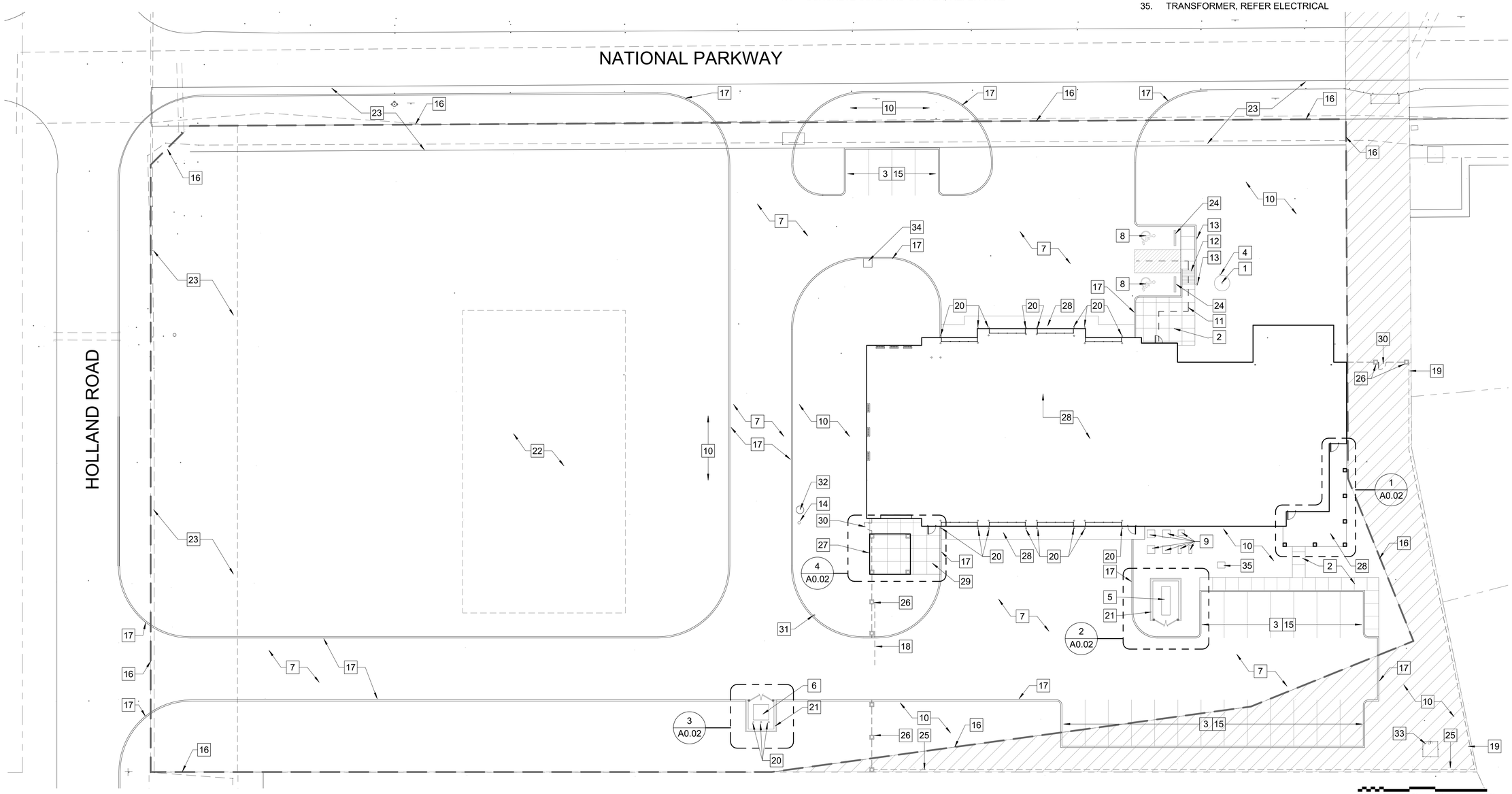
GENERAL NOTES

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B. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC
C. ACCESSIBLE ROUTES (SHOWN AS - - - -) SHALL BE NO GREATER THAN 5% SLOPE IN THE DIRECTION OF TRAVEL WITH 2% OR LESS CROSS SLOPE
D. PROTECT ALL UNDERGROUND UTILITIES, PIPING, HOSE BIBS, ELECTRICAL, ETC. UNLESS SCHEDULED FOR DEMOLITION/NEW WORK. REFER TO CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS
E. REFERENCE LANDSCAPE DRAWINGS FOR NEW LANDSCAPE ITEMS TO MEET CITY OF MANSFIELD REQUIREMENTS.
F. REFER TO LANDSCAPE PLANS FOR PIPE SLEEVES
G. ALL SITE UTILITY LINES ARE PROPOSED TO BE LOCATED UNDERGROUND.

NOTES BY NUMBER

"X"

1. 35' FLAGPOLE LIGHTS, REFER 1/A0.03
2. CONCRETE WALK, REFER CIVIL
3. CONCRETE PARKING, REFER CIVIL
4. FLAGPOLE LIGHT, REFER ELECTRICAL
5. GENERATOR, REFER ELECTRICAL
6. DUMPSTER
7. CONCRETE DRIVE, REFER CIVIL
8. ACCESSIBLE PARKING SPACE, 2% MAX SLOP IN ALL DIRECTIONS
9. CONDENSING UNIT ON 4" THICK CONCRETE PADS, REFER MECHANICAL
10. LANDSCAPE AREA, REFER LANDSCAPE
11. ACCESSIBLE PATH, FREE OF BARRIERS, 5% MAX SLOPE WITH 2% MAX CROSS SLOPE, PER TEXAS ACCESSIBILITY STANDARDS
12. ACCESSIBLE CURB RAMP
13. VAN ACCESSIBLE PARKING SIGN, MINIMUM 2 FEET FROM BACK OF CURB, REFER CIVIL
14. FIRE HYDRANT, REFER CIVIL
15. 2" WIDE WHITE STRIPING
16. PROPERTY LINE
17. CONCRETE CURB AND GUTTER, REFER CIVIL
18. DECORATIVE METAL ROLLING GATE, REFER 1/A0.04 AND CIVIL
19. EXISTING FENCE
20. PREFINISHED BOLLARD, REF. DETAIL 2 & 3/A0.03
21. MASONRY SCREEN WALL, REFER STRUCTURAL
22. FUTURE RESERVE BAY
23. UTILITY EASEMENT, REFER CIVIL
24. WHEEL STOPS, REFER CIVIL
25. CEDAR FENCE WITH GALVANIZED STEEL POSTS ALONG PROPERTY LINE, REFER 7/A0.04
26. WROUGHT IRON FENCE WITH NATURAL STONE VENEER COLUMNS, REFER 5 & 6/A0.04
27. CANOPY ON PIERS, REFER STRUCTURAL
28. STRUCTURAL SLAB, FINISH FLOOR = 100'-0", REFER STRUCTURAL
29. FLOATING SLAB, REFER STRUCTURAL
30. 3'-0" WIDE WROUGHT IRON FENCE GATE, REFER 6/A0.05
31. KEYPAD, REFER 5/A0.05
32. FIRE DEPARTMENT CONNECTION
33. DRAINAGE BASIN, REFER CIVIL
34. MAILBOX, GC TO VERIFY LOCATION WITH OWNER/ARCHITECT, REFER 7-10/A0.05
35. TRANSFORMER, REFER ELECTRICAL



N

1 A0.01 ARCHITECTURAL SITE PLAN
1" = 20'-0"

10' 0 10' 20' 40'
GRAPHIC SCALE: 1" = 20'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/2019

ISSUE FOR CONSTRUCTION

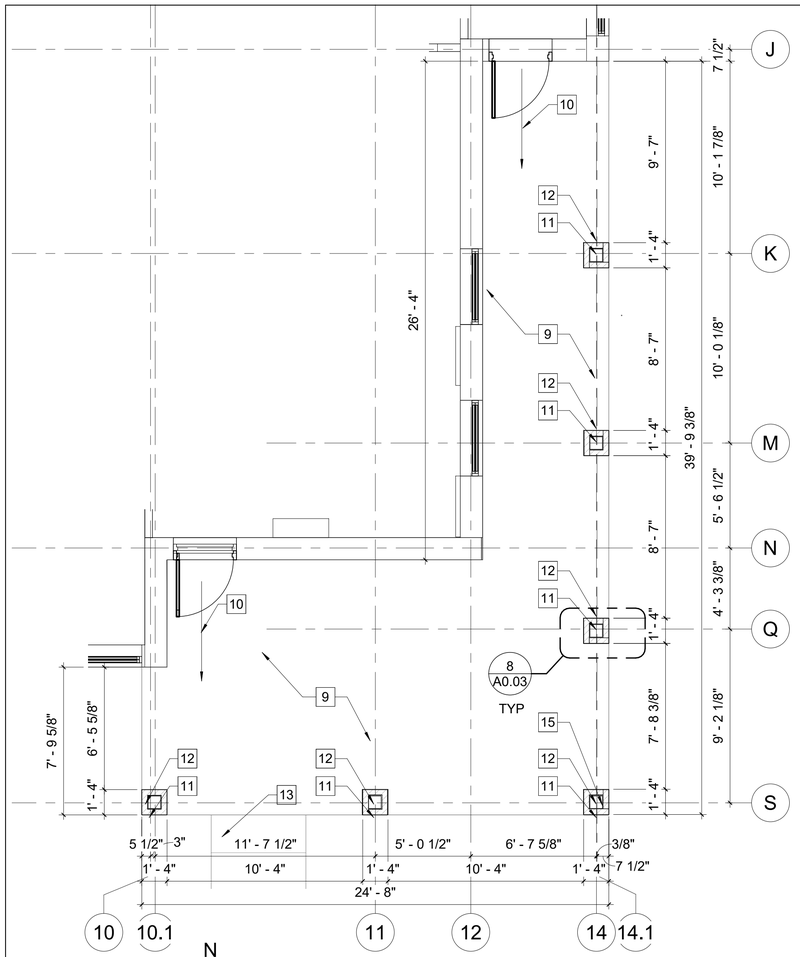
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ARCHITECTURAL SITE PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A0.01

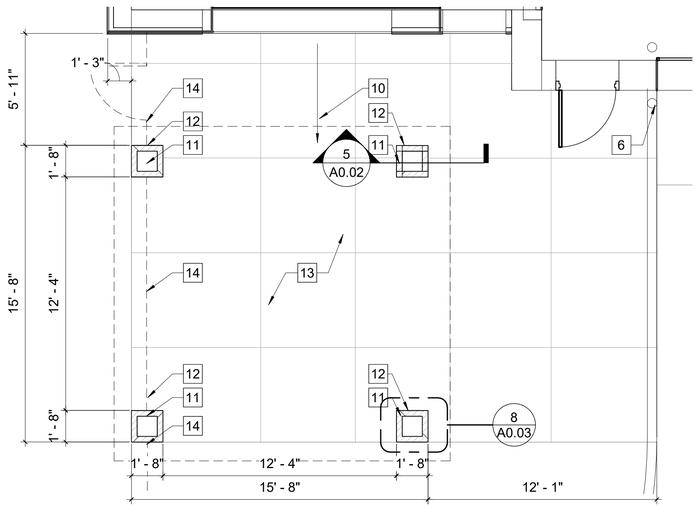
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N

1 A0.02 1/4" = 1'-0"

ENLARGED PATIO



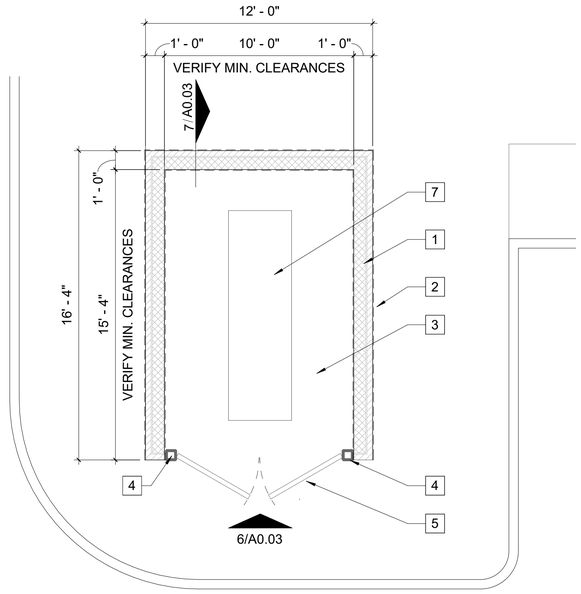
N

4 A0.02 1/4" = 1'-0"

CANOPY FLOOR PLAN

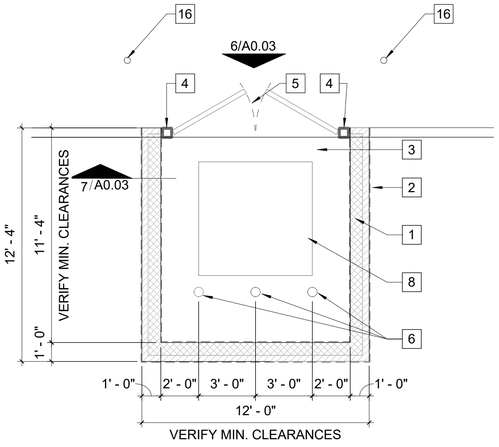
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G. ALL SITE UTILITY LINES ARE PROPOSED TO BE LOCATED UNDERGROUND.



NOTES BY NUMBER "X"

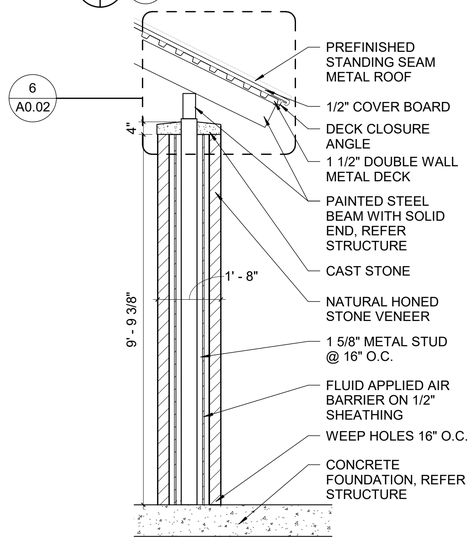
1. MASONRY SCREEN WALL, REFER STRUCTURAL
2. CAST STONE CAP ABOVE SCREEN WALL, REFER 4/A0.03
3. CONCRETE PAD,REFER CIVIL AND FOUNDATION REFER STRUCTURAL
4. 6"X6" X 3/4" GALVANIZED STEEL POST WITH CLOSED TOP, PAINTED
5. GALVANIZED METAL LOUVER GATE DOORS, REFER 6/A0.03
6. CONCRETE FILLED STEEL BOLLARD, REFER 3/A0.03
7. GENERATOR, REFER ELECTRICAL
8. DUMPSTER (NOT IN CONTRACT)
9. CONCRETE FOUNDATION, REFER STRUCTURE
10. SLOPE CONCRETE 1/4" PER FOOT FOR DRAINAGE
11. STEEL COLUMNS, REFER STRUCTURE
12. NATURAL STONE VENEER COLUMN WRAP (F-2)
13. FLOATING SLAB, REFER STRUCTURAL
14 IRON AND STONE VENEER FENCE WITH GATE, REFER 3/A0.04 & 6/A0.05
15. GAS CONNECTION FOR GRILL, REFER PLUMBING
16. DRILL HOLE FOR DROP ROD - SET FOR 110 DEGREE OPENING



N

2 A0.02 1/4" = 1'-0"

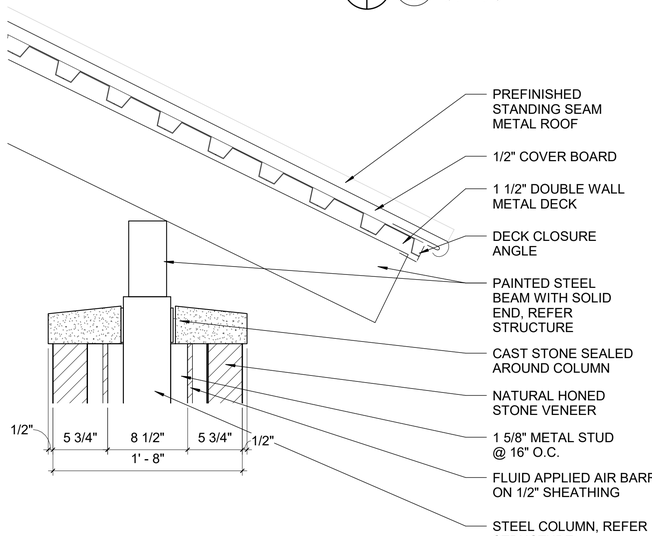
GENERATOR ENCLOSURE



N

3 A0.02 1/4" = 1'-0"

DUMPSTER ENCLOSURE



5 A0.02 1/2" = 1'-0"

PATIO SECTION

6 A0.02 1 1/2" = 1'-0"

PATIO DETAIL

GRAPHIC SCALE: 1-1/2" = 1'-0"
6" 0 6" 1' 2'

GRAPHIC SCALE: 1/2" = 1'-0"
1' 0 1' 2' 4'

GRAPHIC SCALE: 1/4" = 1'-0"
2' 0 2' 4' 8'

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/2019

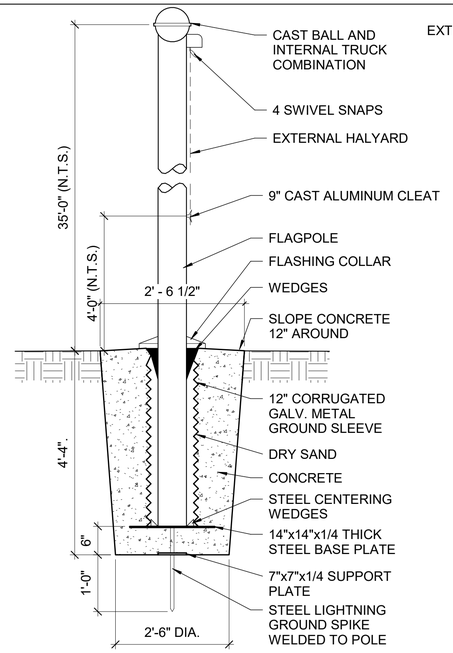
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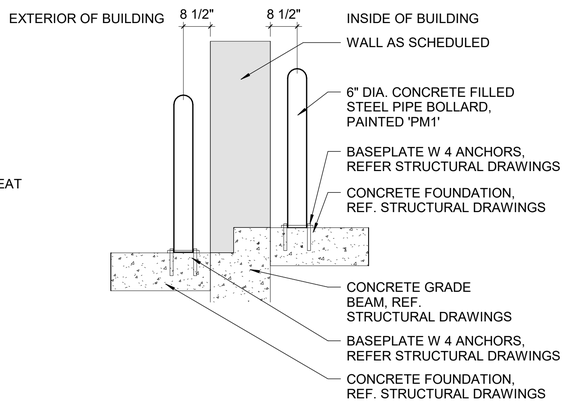
ENLARGED SITE PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A0.02

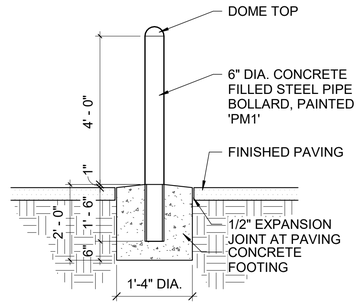
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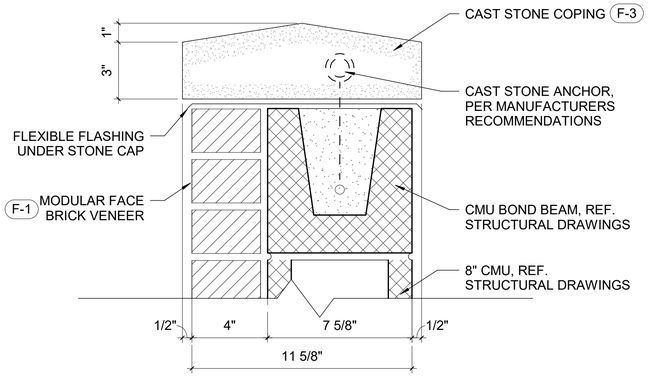
1 A0.03 FLAGPOLE DETAIL
3/4" = 1'-0"



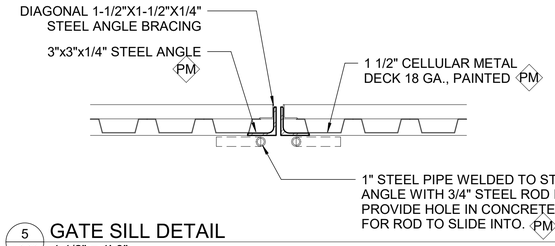
2 A0.03 BUILDING BOLLARD DETAIL
1/2" = 1'-0"



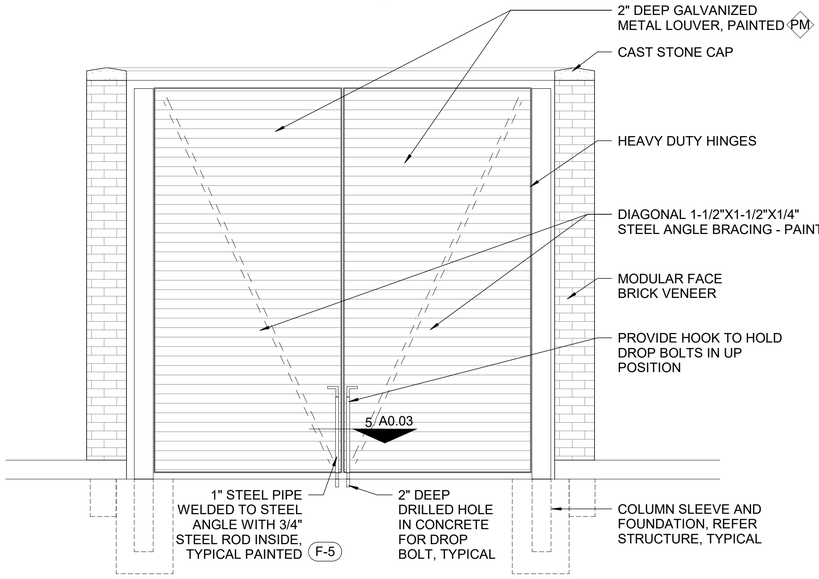
3 A0.03 SITE BOLLARD DETAIL
1/2" = 1'-0"



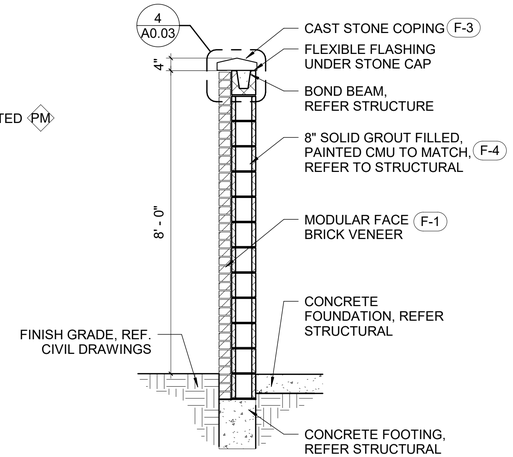
4 A0.03 CAST STONE CAP
3" = 1'-0"



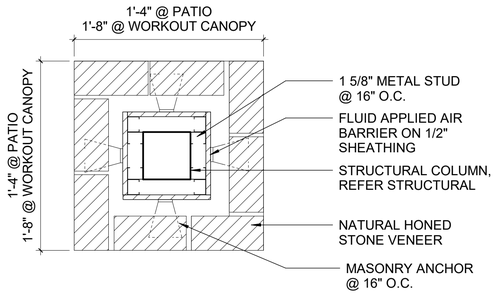
5 A0.03 GATE SILL DETAIL
1 1/2" = 1'-0"



6 A0.03 SCREEN WALL GATE
1/2" = 1'-0"



7 A0.03 DUMPSTER/GENERATOR WALL
1/2" = 1'-0"



8 A0.03 PATIO & CANOPY COL PLAN DTL
1 1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

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

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

3" 0 3" 6" 1'
GRAPHIC SCALE: 3" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/2019

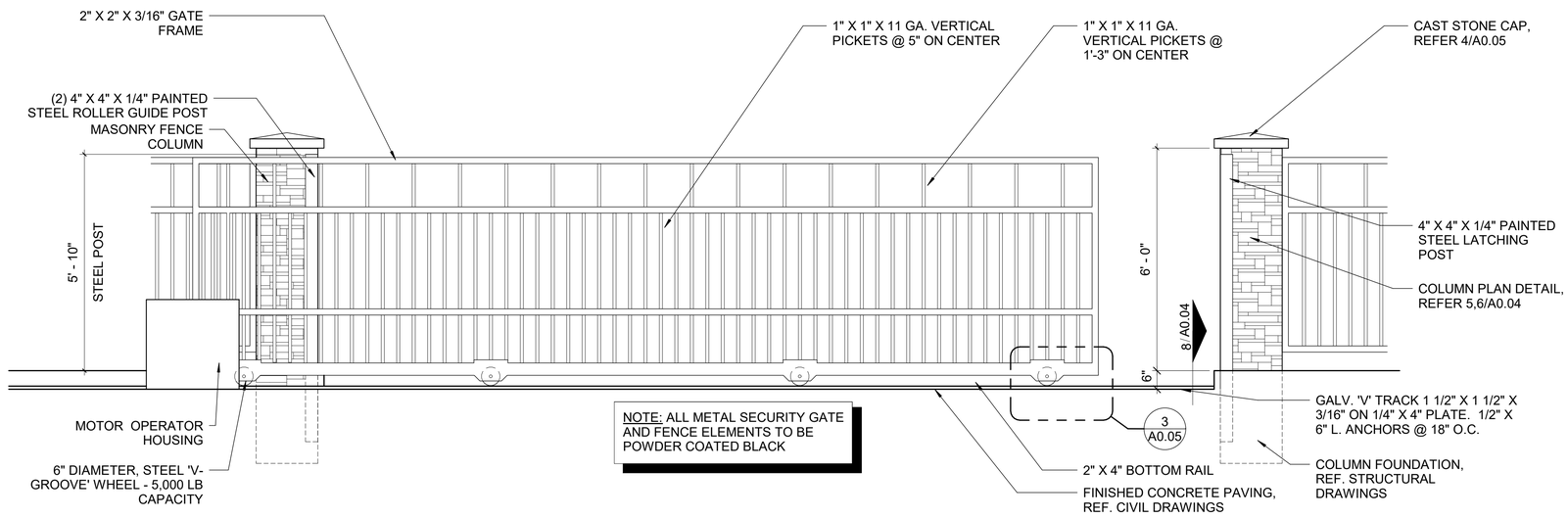
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

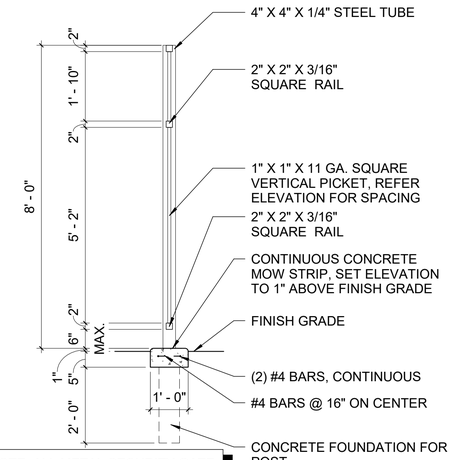
SITE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A0.03

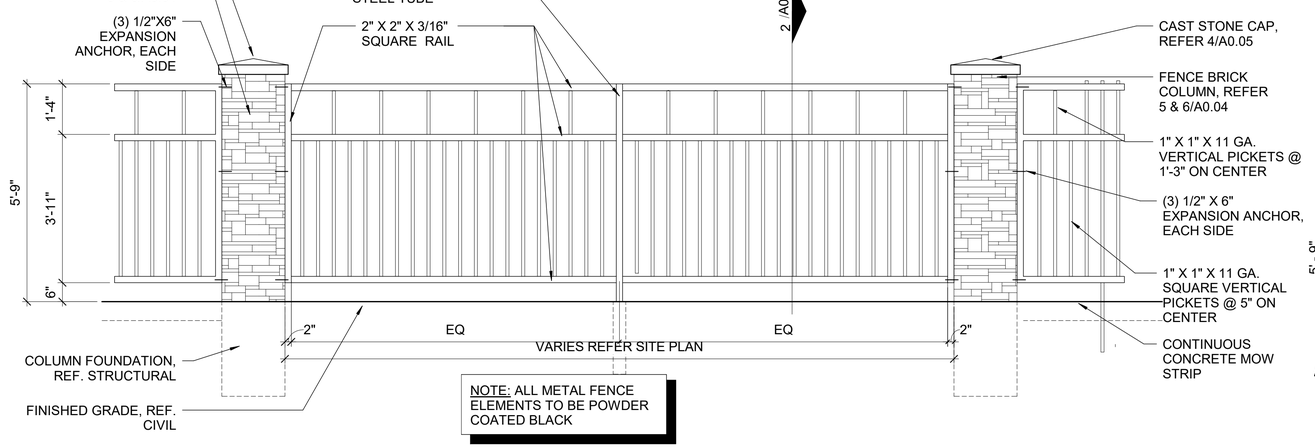
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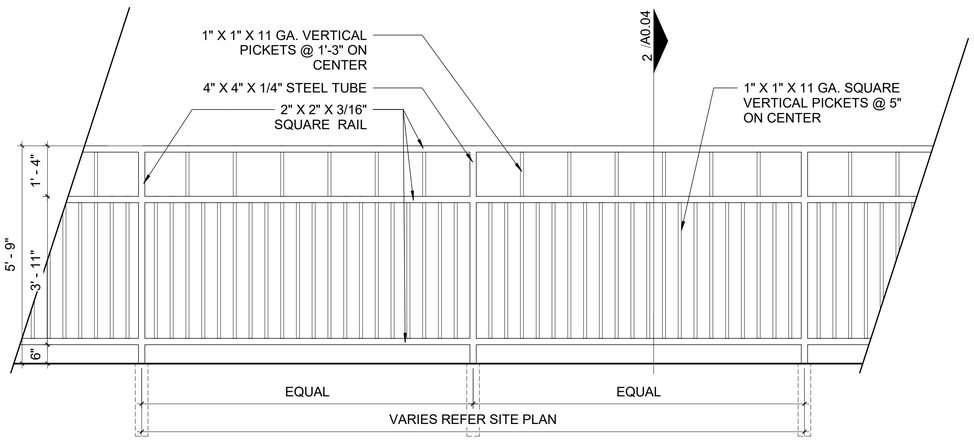
1 A0.04 ROLLING GATE ELEVATION METAL AND BRICK COLUMNS
1/2" = 1'-0"



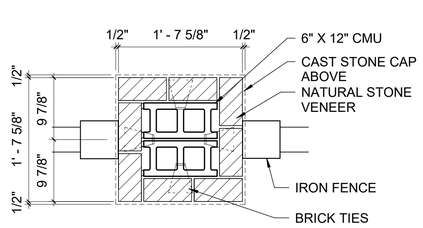
2 A0.04 IRON FENCE SECTION
1/2" = 1'-0"



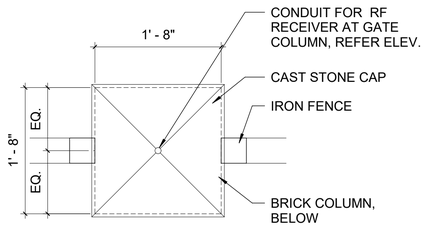
3 A0.04 IRON AND BRICK FENCE ELEVATION
1/2" = 1'-0"



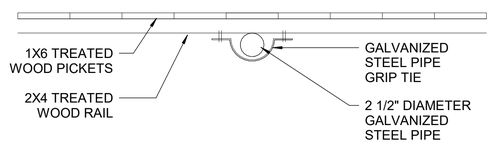
4 A0.04 IRON FENCE ELEVATION1
1/2" = 1'-0"



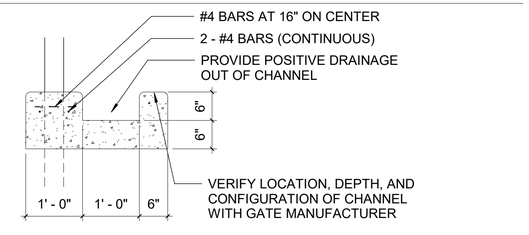
5 A0.04 STONE AND IRON FENCE COLUMN PLAN
1" = 1'-0"



6 A0.04 BRICK AND IRON FENCE COLUMN PLAN - ABOVE
1" = 1'-0"



7. A0.04 FENCE DETAIL
1 1/2" = 1'-0"



8 A0.04 SLIDING GATE TRACK
3/4" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

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

6" 0 6" 1' 2'
GRAPHIC SCALE: 1" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

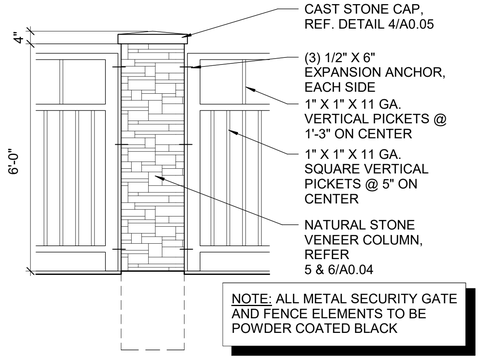
REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS
ISSUE DATE: 11/07/2019

MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063

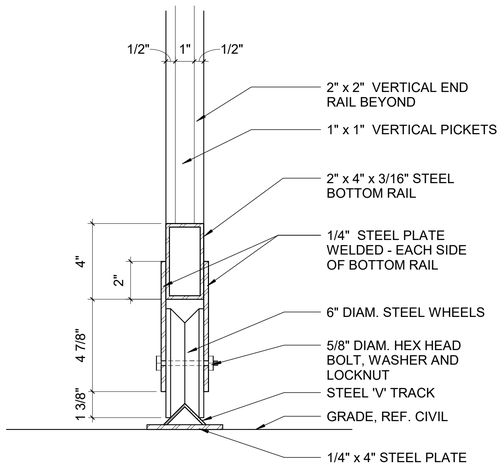
SITE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A0.04

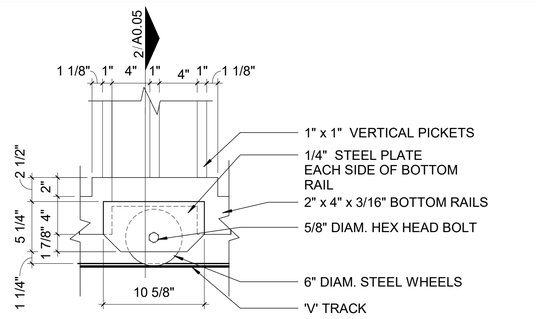
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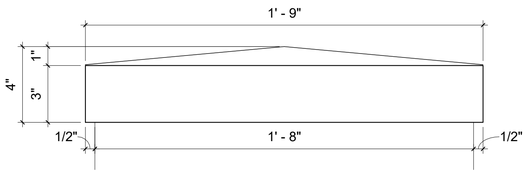
1 A0.05 FENCE BRICK COLUMN ELEVATION
1/2" = 1'-0"



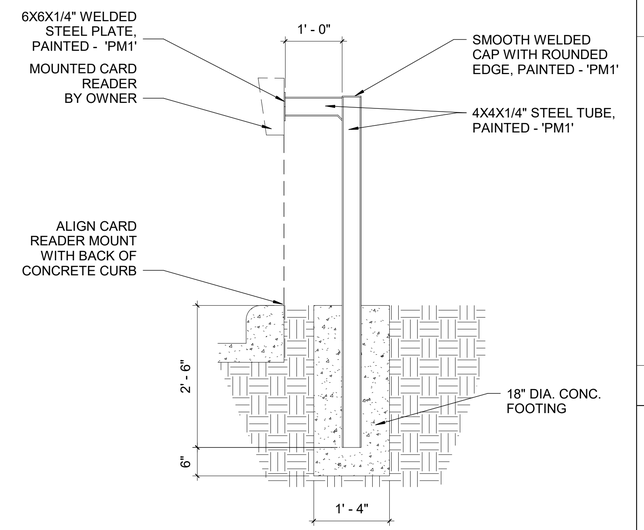
2 A0.05 GATE ROLLER SECTION
3" = 1'-0"



3 A0.05 GATE ROLLER ELEVATION
1 1/2" = 1'-0"



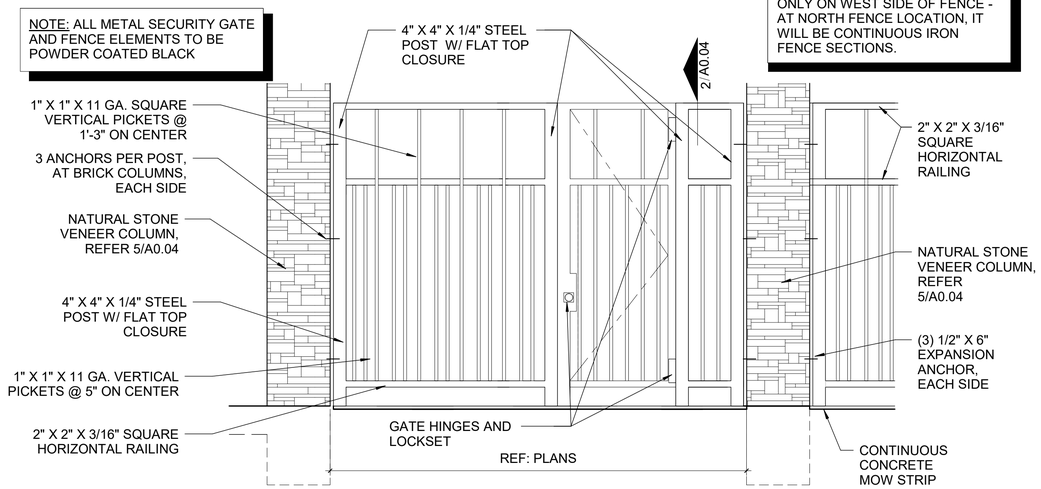
4 A0.05 FENCE CAST STONE CAP DETAIL
3" = 1'-0"



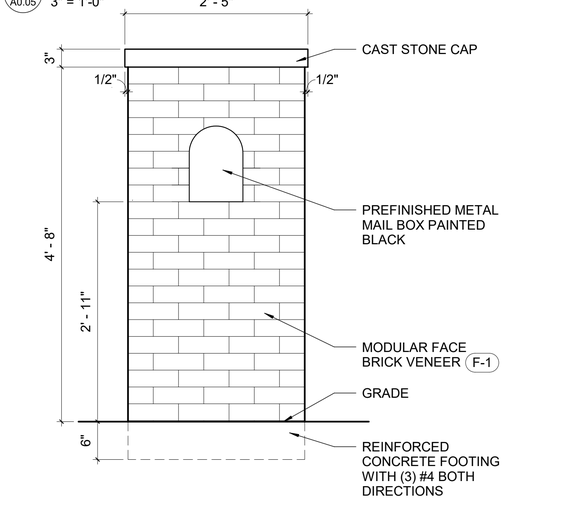
5 A0.05 KEY PAD POST
3/4" = 1'-0"

NOTE: ALL METAL SECURITY GATE AND FENCE ELEMENTS TO BE POWDER COATED BLACK

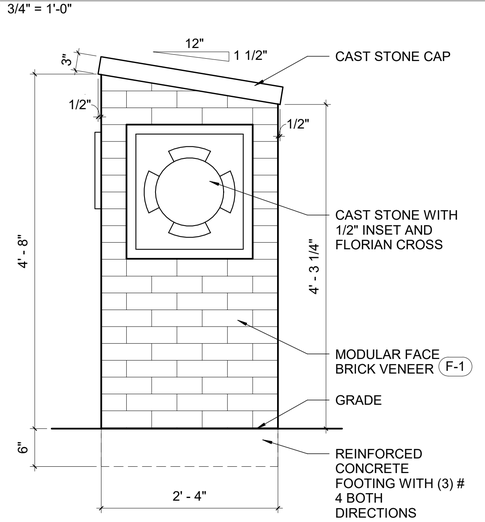
NOTE: STONE VENEER COLUMN ONLY ON WEST SIDE OF FENCE - AT NORTH FENCE LOCATION, IT WILL BE CONTINUOUS IRON FENCE SECTIONS.



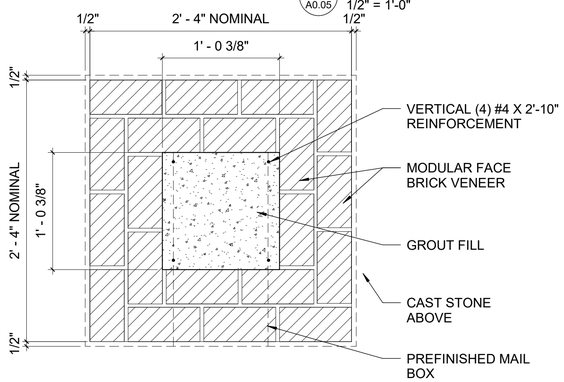
6 A0.05 IRON FENCE GATE ELEVATION
1/2" = 1'-0"



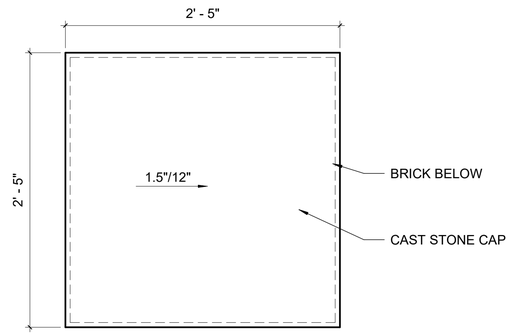
7 A0.05 MAILBOX FRONT ELEVATION
1" = 1'-0"



8 A0.05 MAILBOX SIDE ELEVATION
1" = 1'-0"



9 A0.05 MAILBOX PLAN SECTION
1 1/2" = 1'-0"



10 A0.05 MAILBOX TOP PLAN
1 1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

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

6" 0 6" 1' 2'
GRAPHIC SCALE: 1" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

3" 0 3" 6" 1'
GRAPHIC SCALE: 3" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/2019

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

SITE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A0.05

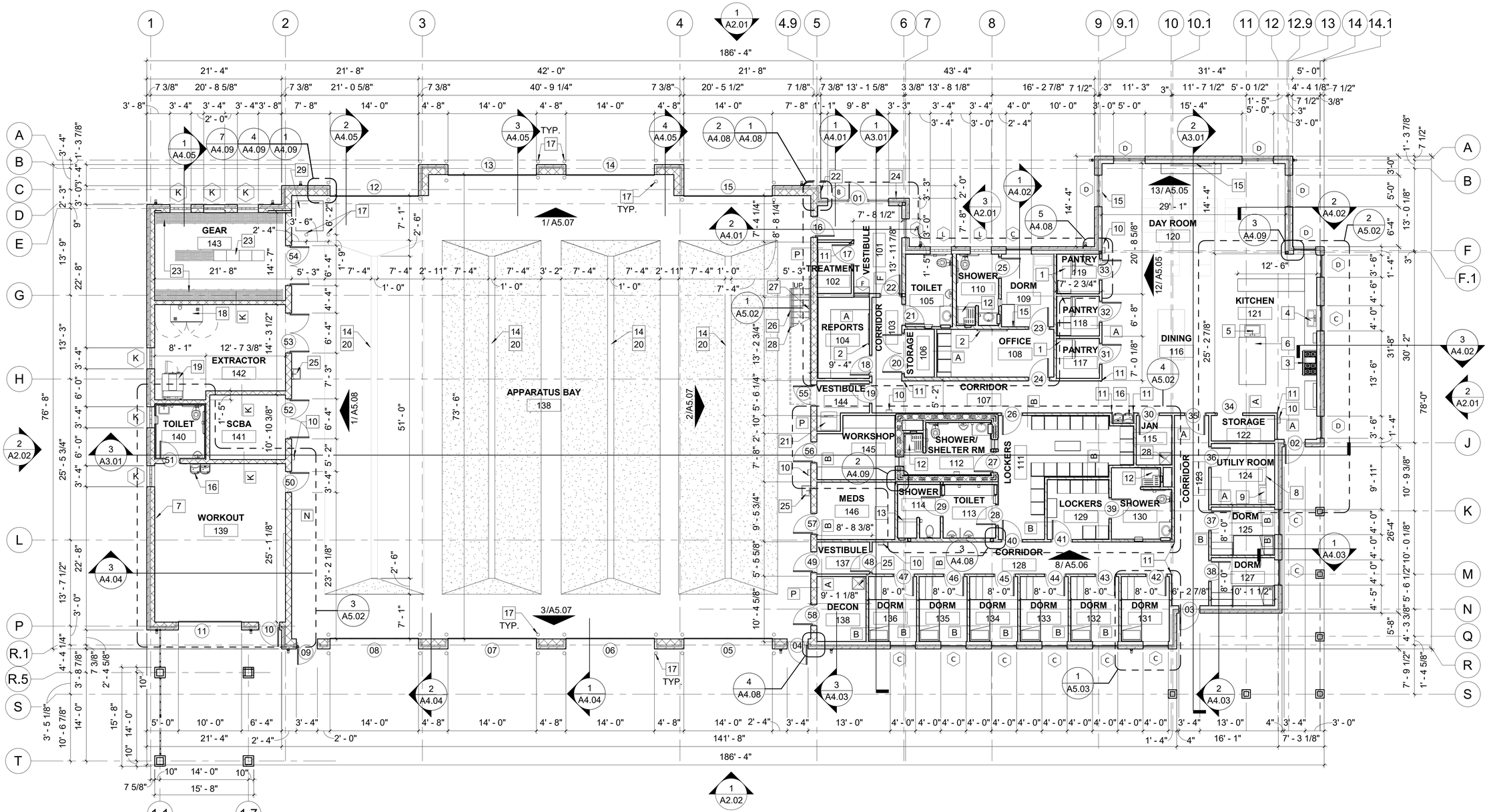
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GENERAL NOTES

A. REFER TO SHEET G0.01 FOR SYMBOLS LEGEND.
B. REFER TO SHEET A5.01 FOR FINISH SCHEDULE.
C. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC.
D. REFER TO SHEET A1.04 FOR PARTITION TYPES.
E. ALL WOOD BLOCKING AND NAILERS SHALL BE FIRE RETARDANT TREATED.
F. " ▨ " INDICATES STUD WALLS W/ SOUND ATTENUATION BATTS
G. " = = = " INDICATES TWO HOUR RATED WALL

NOTES BY NUMBER " X "

1. REFRIGERATOR/FREEZER WITH ICE MAKER.
2. DRY ERASE BOARD 'MB'
3. COOKTOP RANGE AND VENT HOOD WITH ANSUL, REFER MECHANICAL
4. STAINLESS STEEL DOUBLE UNDERMOUNT SINK WITH DISPOSAL.
5. STAINLESS STEEL SINGLE UNDERMOUNT SINK WITH DISPOSAL.
6. DISHWASHER
7. WALL MOUNT MIRRORS, ALONG ENTIRE WALL
8. CLOTHES DRYER.
9. CLOTHES WASHING MACHINE
10. FIRE EXTINGUISHER CABINET
11. CORNER GUARD
12. TAS SHOWER WITH TRENCH DRAIN, REF. 3/A5.03
13. NON TAS SHOWER WITH TRENCH DRAIN, REF. 4/A5.03
14. CONCRETE TRENCH, TRENCH FLOOR TO SLOPE 1/4" PER FOOT OR MORE FROM ENDS OF TRENCH TO DRAIN, REFER STRUCTURAL
15. PROVIDE BLOCKING FOR WALL MOUNTED MONITOR
16. ELECTRIC WATER COOLER WITH BOTTLE FILLERS, REFER PLUMBING
17. PREFINISHED STEEL BOLLARD COVER, REF. DETAIL 2/A0.03.
18. DRYING RACK (OWNER PROVIDED, CONTRACTOR INSTALLED)
19. EXTRACTOR (OWNER PROVIDED, CONTRACTOR INSTALLED)
20. TRENCH GRATE AND DRAIN, REFER PLUMBING
21. ICE MACHINE WITH STORAGE BIN
22. KNOX BOX (VERIFY LOCATION WITH FIRE CHIEF)
23. GEAR LOCKERS
24. BUILDING PLAQUE, REFER 2/A2.03
25. SERVICE SINK, REFER PLUMBING
26. 1 1/2" O.D. GALVANIZED STEEL HANDRAIL (36")/GUARDRAIL (42")
27. 1 1/2" O.D. GALVANIZED STEEL HANDRAIL (36")
28. 1 1/2" O.D. GALVANIZED STEEL PIPERAIL (12") FOR CANE DETECTION, ALIGN WITH STAIR STRINGER ABOVE.
29. FIRE RISER, REFER FIRE PROTECTION



N

1 A1.01 FIRST FLOOR PLAN
1/8" = 1'-0"

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

FLOOR PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A1.01

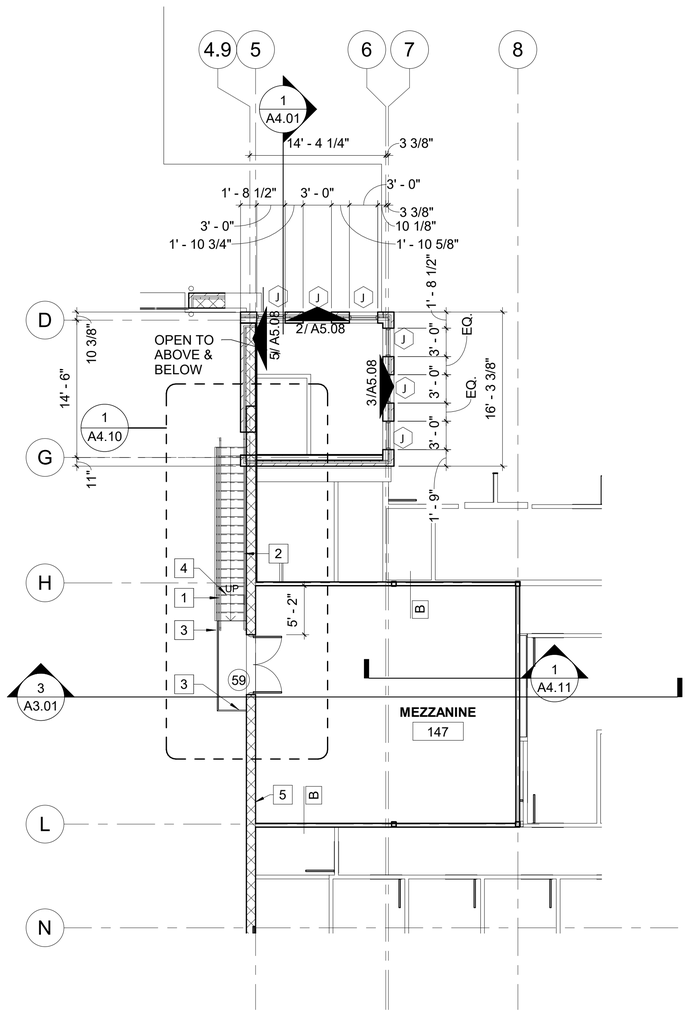
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GENERAL NOTES

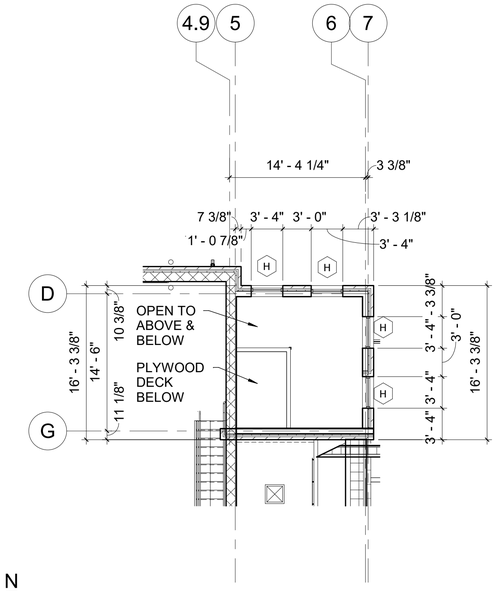
A. REFER TO SHEET G0.01 FOR SYMBOLS LEGEND.
B. REFER TO SHEET A5.01 FOR FINISH SCHEDULE.
C. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC.
D. REFER TO SHEET A1.05 FOR PARTITION TYPES.
E. ALL WOOD BLOCKING AND NAILERS SHALL BE FIRE RETARDANT TREATED.
F. " ▨ " INDICATES STUD WALLS W/ SOUND ATTENUATION BATTS
G. " = = = " INDICATES TWO HOUR RATED WALL

NOTES BY NUMBER " X "

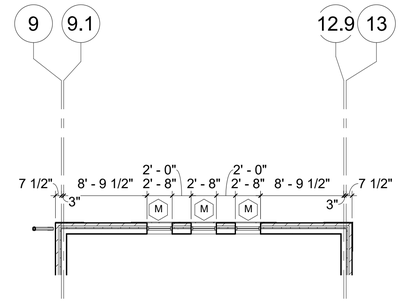
1. 1 1/2" O.D. GALVANIZED STEEL PIPE HANDRAIL (36")/GUARDRAIL (42") WITH SUPPORTS EVERY 5'-0" MAX. WHERE HANDRAILS ARE SUPPORTED BY GUARDRAILS, ALL HANDRAIL TERMINATIONS WILL BE TO A VERTICAL GUARDRAIL POST.1/2" DIAMETER STEEL ROD BALUSTERS SPACED 4" O.C. MAX, REFER DETAILS 3,4,5,6/A4.10
2. 1 1/2" O.D. GALVANIZED STEEL PIPE HANDRAIL (36"), WITH SUPPORTS EVERY 5'-0" O.C., ATTACH TO WALL, REFER DETAILS 3,4,5,6/A4.10
3. 1 1/2" O.D. GALVANIZED STEEL PIPE GUARDRAIL, WITH SUPPORTS EVERY 5'-0" MAX. 1/2" DIAMETER STEEL ROD BALUSTERS SPACED 4" O.C. MAX
4. CONCRETE FILLED METAL PAN STAIRS, REFER 4,5,6/A4.10
5. FIRE EXTINGUISHER



N
1 / A1.02 MEZZANINE FLOOR PLAN
1/8" = 1'-0"



N
2 / A1.02 INTERMEDIATE TOWER LEVEL
1/8" = 1'-0"



N
3 / A1.02 DAY ROOM INTERMEDIATE LEVEL
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS

ISSUE DATE: 11/17/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

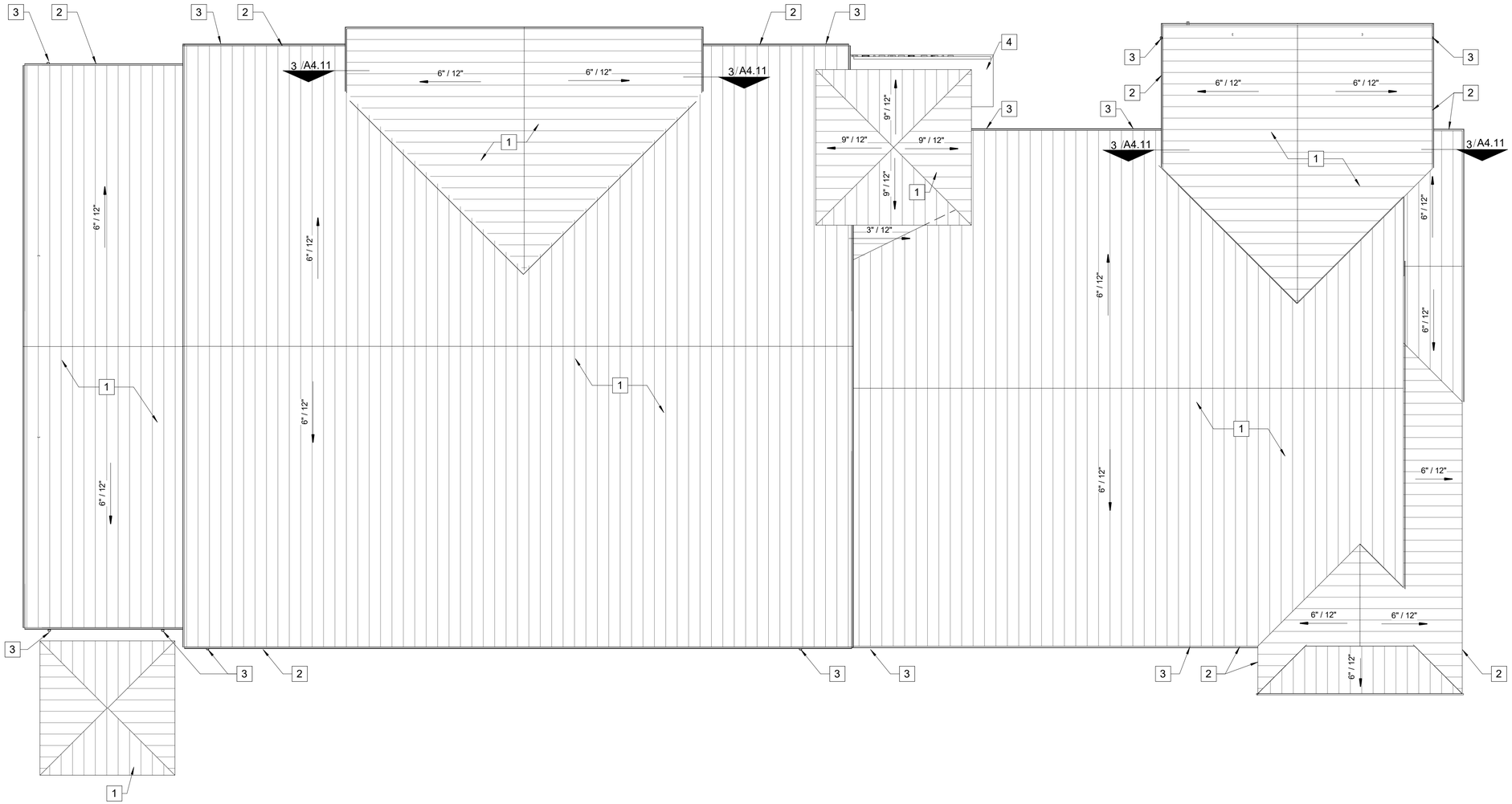
FLOOR PLAN - MEZZANINE LEVEL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A1.02

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NOTES BY NUMBER "X"

1. STANDING SEAM METAL ROOF SYSTEM
2. PREFINISHED METAL GUTTER
3. PREFINISHED METAL DOWNSPOUT WITH CAST IRON BOOT
4. PREFINISHED METAL SUN SHADE, REFER STRUCTURAL



1 / A1.03 FIRE STATION ROOF PLAN
1/8" = 1'-0"

N

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS

ISSUE FOR CONSTRUCTION

ISSUE DATE: 11/07/19

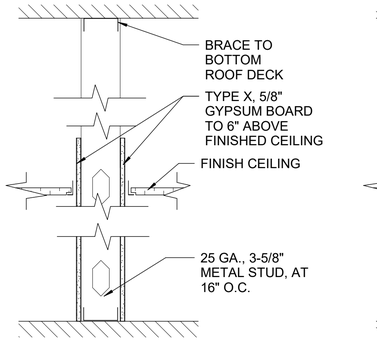
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ROOF PLAN

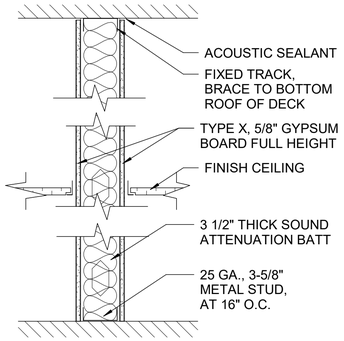
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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A1.03

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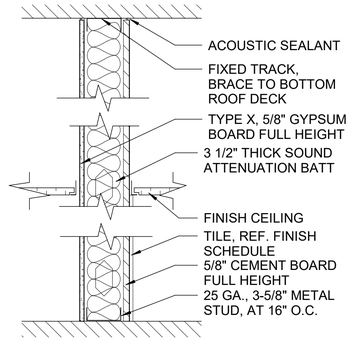
WALL TYPE A

UL	UNRATED
STC	UNRATED
FIRE RATING	UNRATED
THICKNESS	4-7/8"



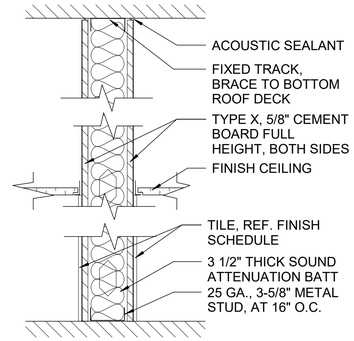
WALL TYPE B

UL	U407
STC	44
FIRE RATING	UNRATED
THICKNESS	4-7/8"



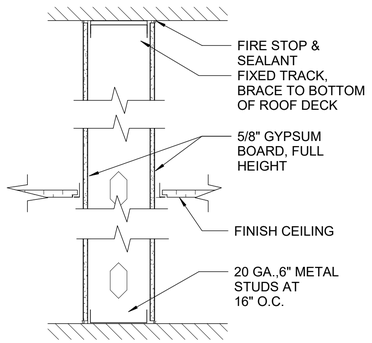
WALL TYPE D

UL	UNRATED
STC	44
FIRE RATING	UNRATED
THICKNESS	4-7/8"
(NOT INCLUDING TILE ASSEMBLY THICKNESS)	



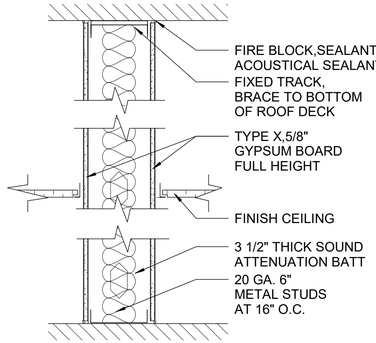
WALL TYPE E

UL	UNRATED
STC	44
FIRE RATING	UNRATED
THICKNESS	4-7/8"
(NOT INCLUDING TILE ASSEMBLY THICKNESS)	



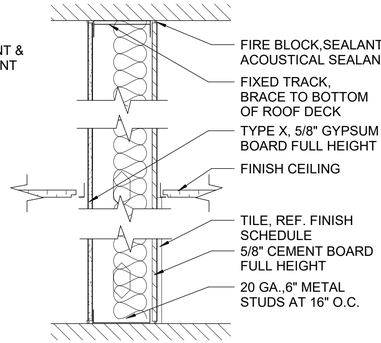
WALL TYPE F

UL	UNRATED
STC	UNRATED
FIRE RATING	UNRATED
THICKNESS	7-1/4"



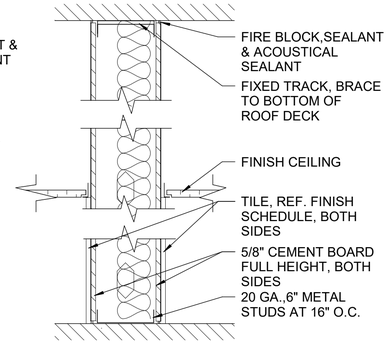
WALL TYPE G

UL	UNRATED
STC	UNRATED
FIRE RATING	UNRATED
THICKNESS	7-1/4"



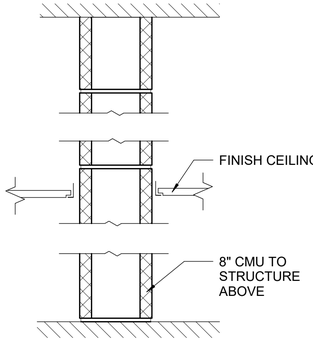
WALL TYPE H

UL	UNRATED
STC	UNRATED
FIRE RATING	UNRATED
THICKNESS	7-1/4"
(NOT INCLUDING TILE ASSEMBLY THICKNESS)	



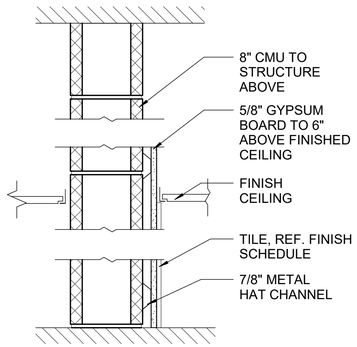
WALL TYPE J

UL	UNRATED
STC	UNRATED
FIRE RATING	UNRATED
THICKNESS	7-1/4"
(NOT INCLUDING TILE ASSEMBLY THICKNESS)	



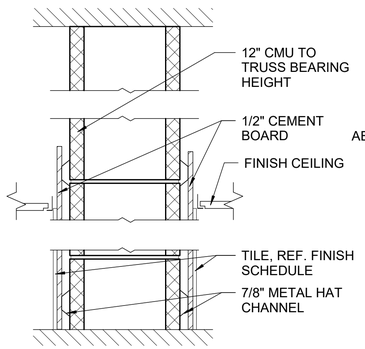
WALL TYPE K

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



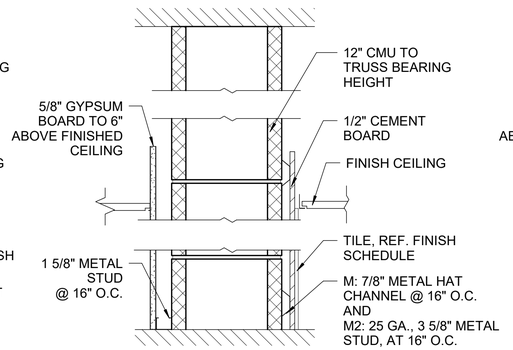
WALL TYPE L

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



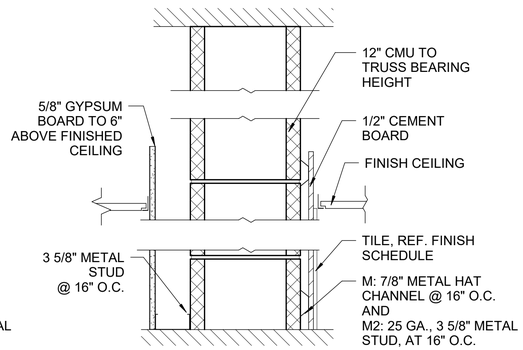
WALL TYPE M1

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



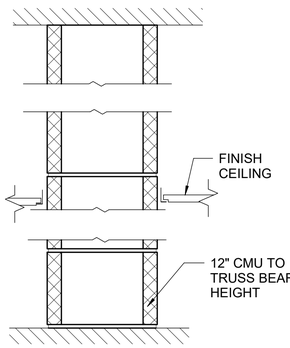
WALL TYPE M2

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



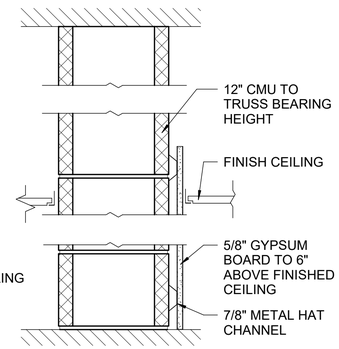
WALL TYPE M3

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



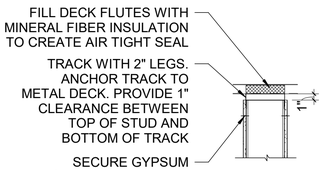
WALL TYPE N

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"

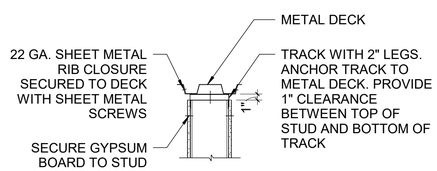


WALL TYPE P

UL	U905
STC	
FIRE RATING	2 HR
THICKNESS	7-5/8"



PERPENDICULAR TO DECK



PARALLEL TO DECK

6" 0 6" 1' 2'

GRAPHIC SCALE: 1" = 1'-0"

6" 0 6" 1' 2'

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

PARTITION TYPES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A1.04

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GENERAL NOTES

A. REFER TO G0.01 FOR SYMBOLS LEGEND
B. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC

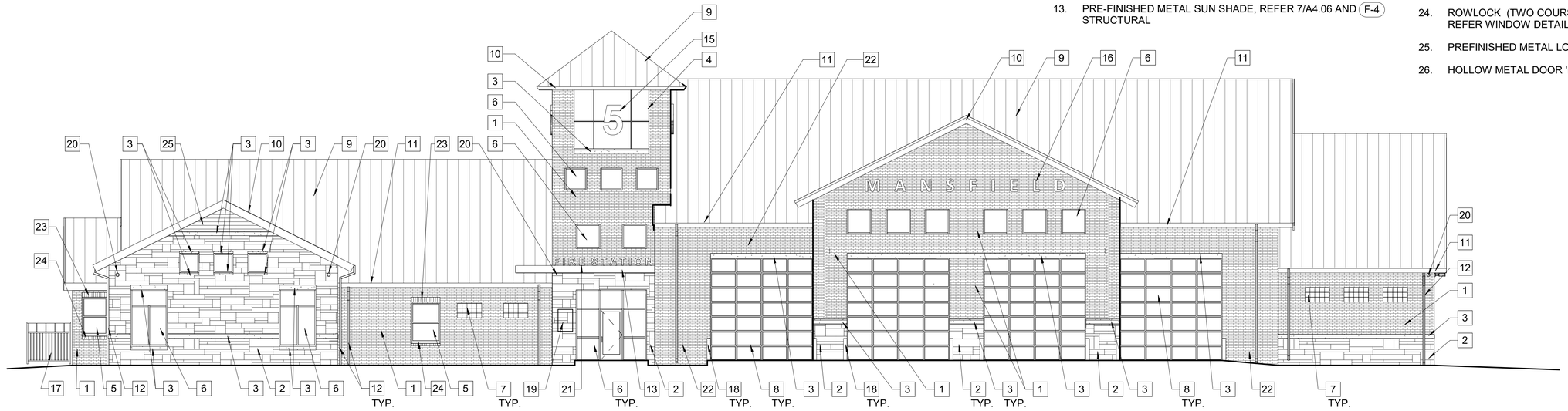
EXTERIOR FINISH LEGEND

- (F-1) MODULAR FACE BRICK VENEER - FIELD COLOR - 'ACME': CRANBERRY
- (F-2) NATURAL (HONED) LUEDERS; RANDOM ASHLAR PATTERN SIZE TO BE 8",10", 12" TALL WITH RANDOM CHOPPED LENGTHS, AVOID SLIVERS IN THIS PATTERN. SMOKEY RIVER OR BLUE CHARCOAL
- (F-3) CAST STONE - 'ACME': WHITESTONE
- (F-4) PAINTED METAL - 'PAC CLAD': GRANITE
- (F-5) ALUMINUM ANODIZED - 'TUEBELITE': SLATE GRAY
- (F-6) ALUMINUM COMPOSITE PANEL - 'ALUCOBOND': CHAMPAGNE METALLIC COOL
- (F-7) MODULAR FACE BRICK VENEER - ACCENT COLOR - 'ACME': DARK IRON SPOT VELOUR

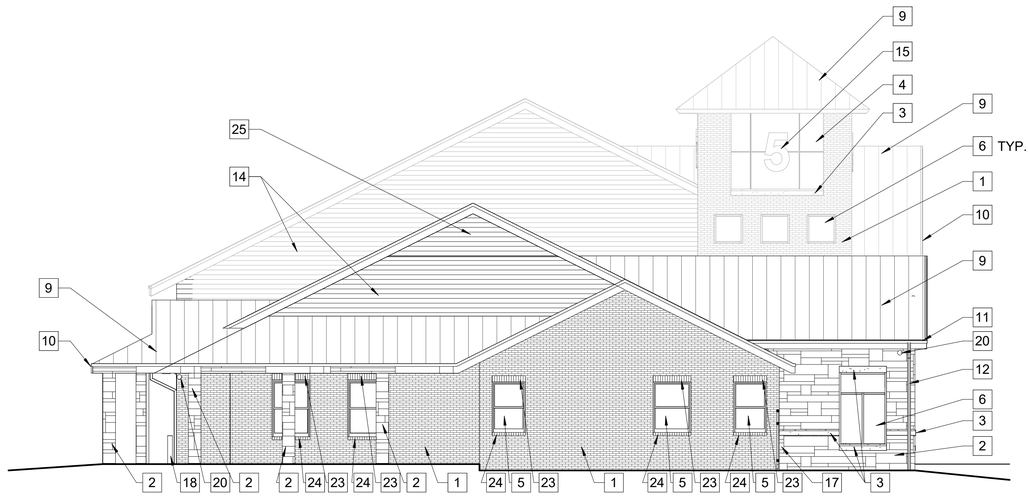
NOTES BY NUMBER

"X"

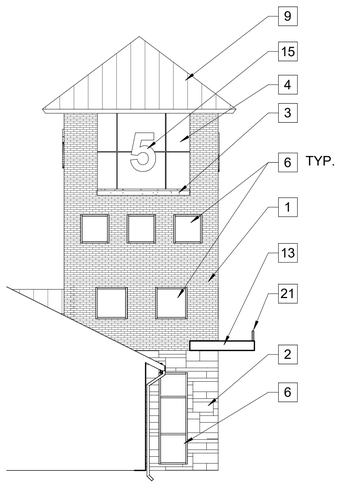
1. MODULAR FACE BRICK VENEER - FIELD COLOR (F-1)
2. NATURAL STONE VENEER (F-2)
3. CAST STONE (F-3)
4. ALUMINUM COMPOSITE PANEL (F-6)
5. SINGLE HUNG WINDOW AS SCHEDULED (F-5)
6. ALUMINUM STOREFRONT (F-5)
7. GLASSBLOCK WINDOW
8. OVERHEAD METAL AND INSULATED GLASS BAY DOOR (F-5)
9. PREFINISHED STANDING SEAM METAL ROOF (F-4)
10. PREFINISHED METAL FASCIA (F-4)
11. PREFINISHED METAL GUTTER (F-4)
12. PREFINISHED METAL DOWNSPOUT WITH CAST IRON BOOT (F-4)
13. PRE-FINISHED METAL SUN SHADE, REFER 7/A4.06 AND STRUCTURAL (F-4)
14. PREFINISHED METAL WALL PANEL (F-4)
15. 48" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 4/A2.03 AND ELECTRICAL.
16. 22" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 1/A2.03 AND ELECTRICAL.
17. IRON FENCE, REFER A0.01 (F-4)
18. PREFINISHED STEEL BOLLARD, REFER 2, 3/A0.03 (F-4)
19. BUILDING PLAQUE, REFER 2/A2.03
20. BLANK PLATE FOR FUTURE SECURITY CAMERA, REFER ELECTRICAL
21. 12" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 3/A2.03 AND ELECTRICAL.
22. MODULAR FACE BRICK VENEER - ACCENT COLOR (F-7)
23. ONE SOLDIER COURSE ABOVE WINDOW HEAD, REFER WINDOW DETAILS
24. ROWLOCK (TWO COURSES TALL) BELOW WINDOW SILL, REFER WINDOW DETAILS
25. PREFINISHED METAL LOUVER (F-4)
26. HOLLOW METAL DOOR 'PM'



1 A2.01 NORTH ELEVATION
1/8" = 1'-0"



2 A2.01 EAST ELEVATION
1/8" = 1'-0"



3 A2.01 EAST TOWER ELEVATION
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT * KARL A. KOMATSU * 6843 * STATE OF TEXAS *

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

BUILDING ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A2.01

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GENERAL NOTES

A. REFER TO G0.01 FOR SYMBOLS LEGEND
B. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC

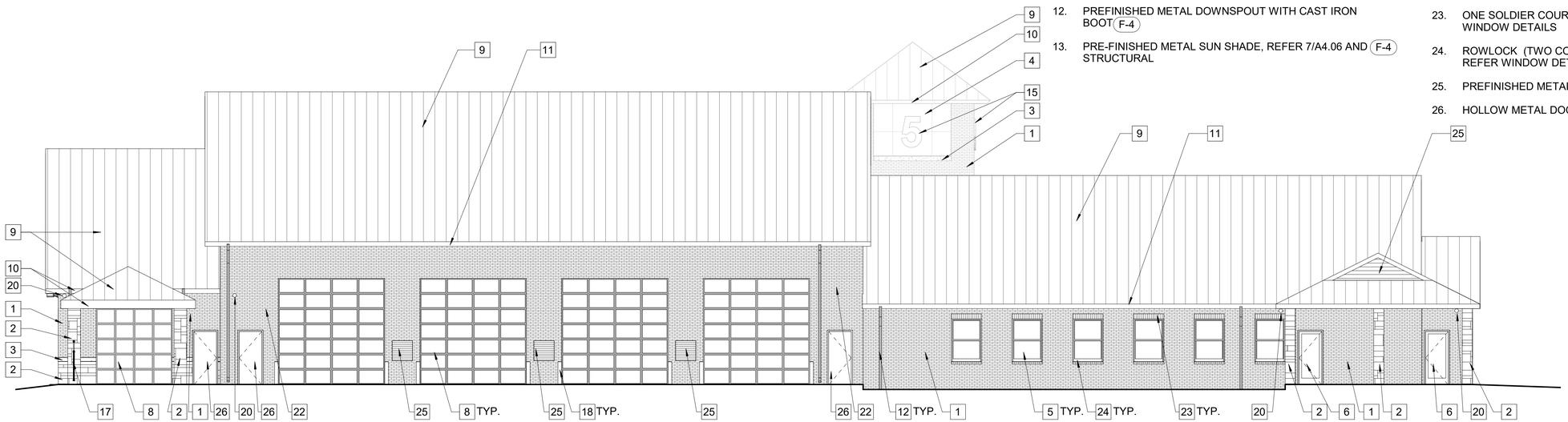
EXTERIOR FINISH LEGEND

- (F-1) MODULAR FACE BRICK VENEER - FIELD COLOR - 'ACME': CRANBERRY
- (F-2) NATURAL (HONED) LUEDERS; RANDOM ASHLAR PATTERN SIZE TO BE 8",10", 12" TALL WITH RANDOM CHOPPED LENGTHS, AVOID SLIVERS IN THIS PATTERN. SMOKEY RIVER OR BLUE CHARCOAL
- (F-3) CAST STONE - 'ACME': WHITESTONE
- (F-4) PAINTED METAL - 'PAC CLAD': GRANITE
- (F-5) ALUMINUM ANODIZED - 'TUEBELITE': SLATE GRAY
- (F-6) ALUMINUM COMPOSITE PANEL - 'ALUCOBOND': CHAMPAGNE METALLIC COOL
- (F-7) MODULAR FACE BRICK VENEER - ACCENT COLOR - 'ACME': DARK IRON SPOT VELOUR

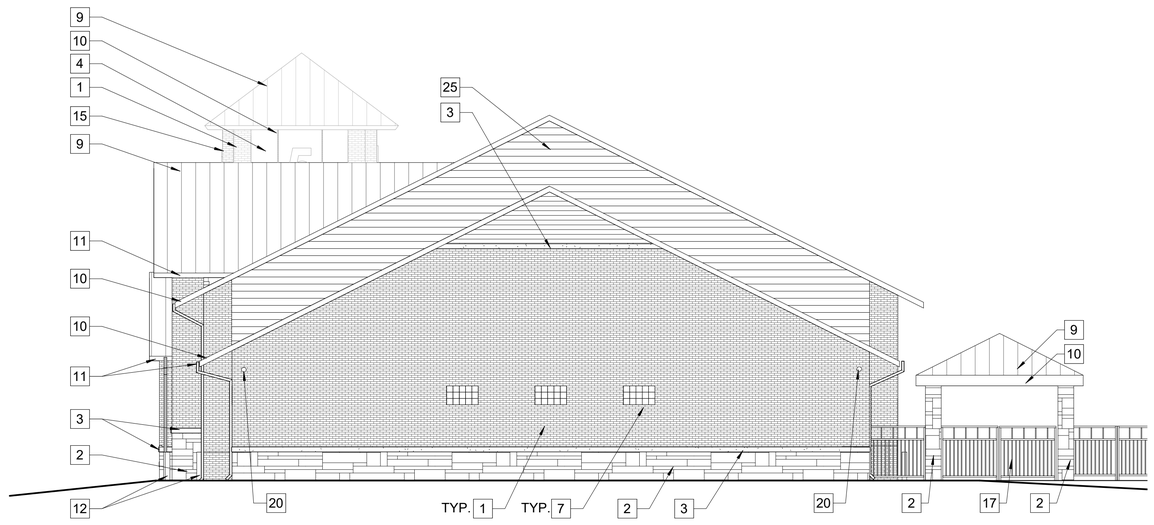
NOTES BY NUMBER

"X"

1. MODULAR FACE BRICK VENEER - FIELD COLOR (F-1)
2. NATURAL STONE VENEER (F-2)
3. CAST STONE (F-3)
4. ALUMINUM COMPOSITE PANEL (F-6)
5. SINGLE HUNG WINDOW AS SCHEDULED (F-5)
6. ALUMINUM STOREFRONT (F-5)
7. GLASSBLOCK WINDOW
8. OVERHEAD METAL AND INSULATED GLASS BAY DOOR (F-5)
9. PREFINISHED STANDING SEAM METAL ROOF (F-4)
10. PREFINISHED METAL FASCIA (F-4)
11. PREFINISHED METAL GUTTER (F-4)
12. PREFINISHED METAL DOWNSPOUT WITH CAST IRON BOOT (F-4)
13. PRE-FINISHED METAL SUN SHADE, REFER 7/A4.06 AND (F-4) STRUCTURAL
14. PREFINISHED METAL WALL PANEL (F-4)
15. 48" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 4/A2.03 AND ELECTRICAL.
16. 22" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 1/A2.03 AND ELECTRICAL.
17. IRON FENCE, REFER A0.01 (F-4)
18. PREFINISHED STEEL BOLLARD, REFER 2, 3/A0.03 (F-4)
19. BUILDING PLAQUE, REFER 2/A2.03
20. BLANK PLATE FOR FUTURE SECURITY CAMERA, REFER ELECTRICAL
21. 12" TALL LIGHTED, ALUMINUM PINNED LETTERS, REFER 3/A2.03 AND ELECTRICAL.
22. MODULAR FACE BRICK VENEER - ACCENT COLOR (F-7)
23. ONE SOLDIER COURSE ABOVE WINDOW HEAD, REFER WINDOW DETAILS
24. ROWLOCK (TWO COURSES TALL) BELOW WINDOW SILL, REFER WINDOW DETAILS
25. PREFINISHED METAL LOUVER (F-4)
26. HOLLOW METAL DOOR 'PM'



1 A2.02 SOUTH ELEVATION
1/8" = 1'-0"



2 A2.02 WEST ELEVATION
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT MARC A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

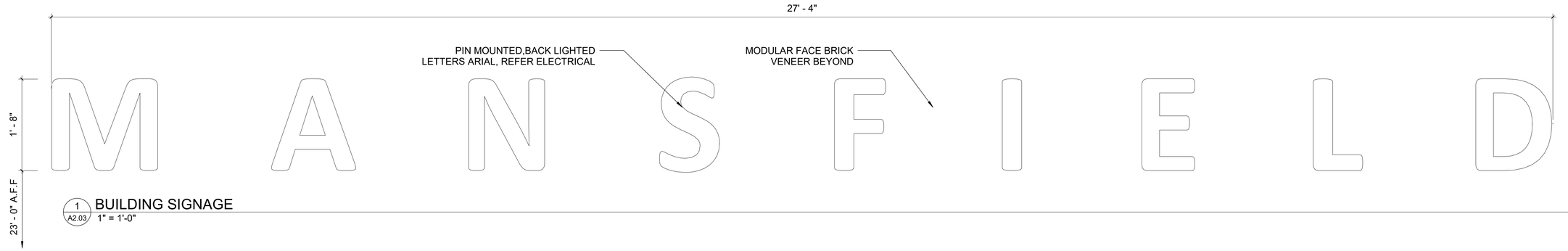
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

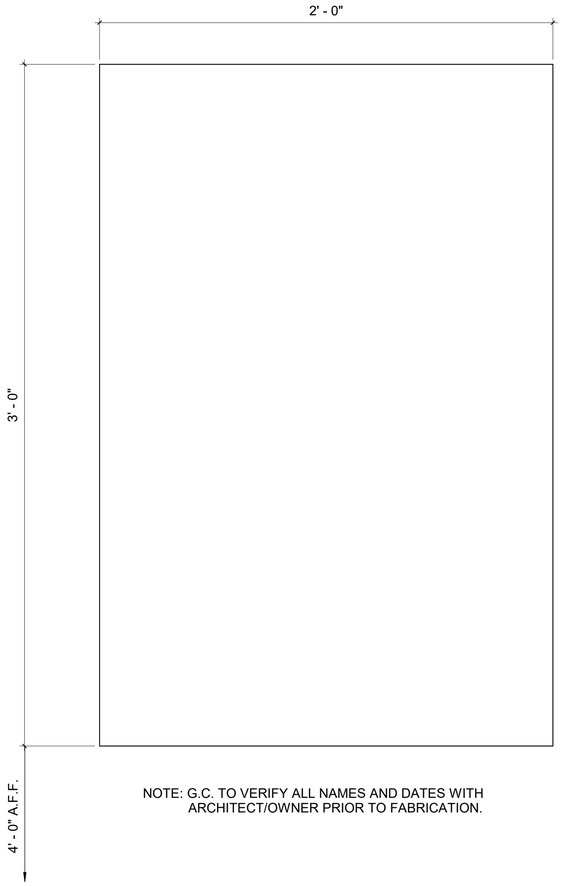
BUILDING ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A2.02

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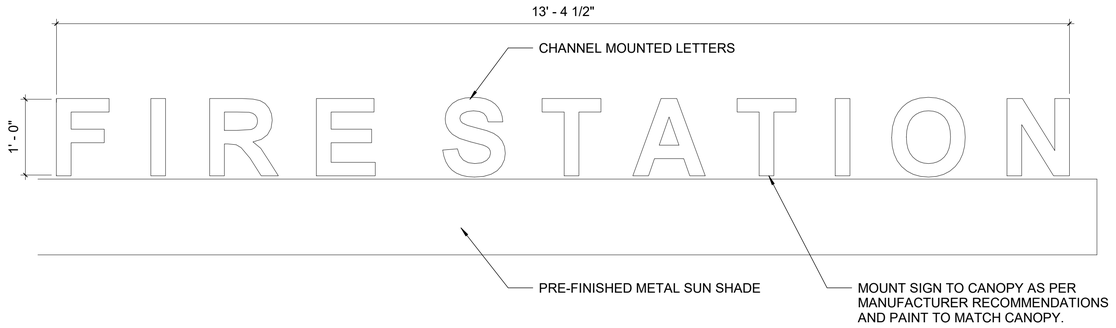


1 A2.03 BUILDING SIGNAGE
1" = 1'-0"

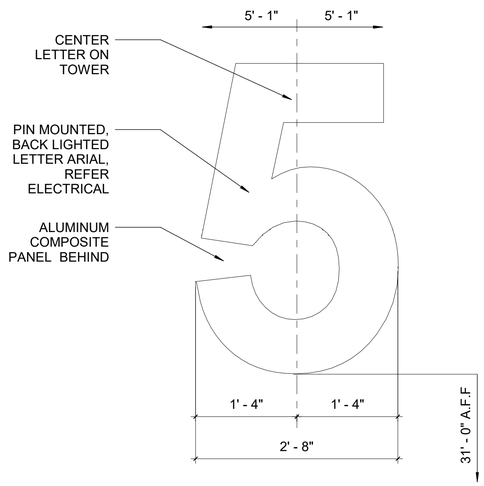


NOTE: G.C. TO VERIFY ALL NAMES AND DATES WITH ARCHITECT/OWNER PRIOR TO FABRICATION.

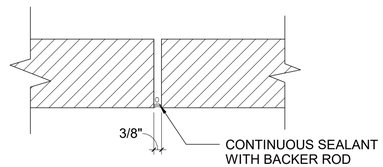
2 A2.03 BUILDING PLAQUE
3" = 1'-0"



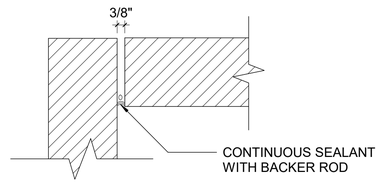
3 A2.03 CANOPY LETTERS
1" = 1'-0"



4 A2.03 BUILDING NUMBER
1" = 1'-0"



5 A2.03 BRICK CONTROL JOINT DETAIL
3" = 1'-0"



6 A2.03 BRICK CONTROL JOINT DETAIL
3" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1" = 1'-0"

3" 0 3" 6" 1'
GRAPHIC SCALE: 3" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KIRK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

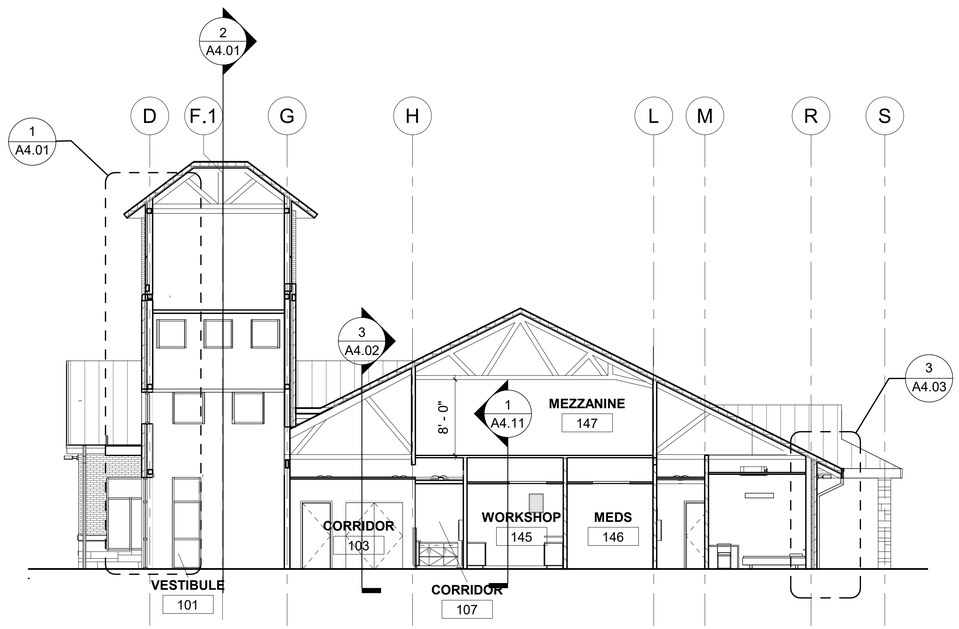
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

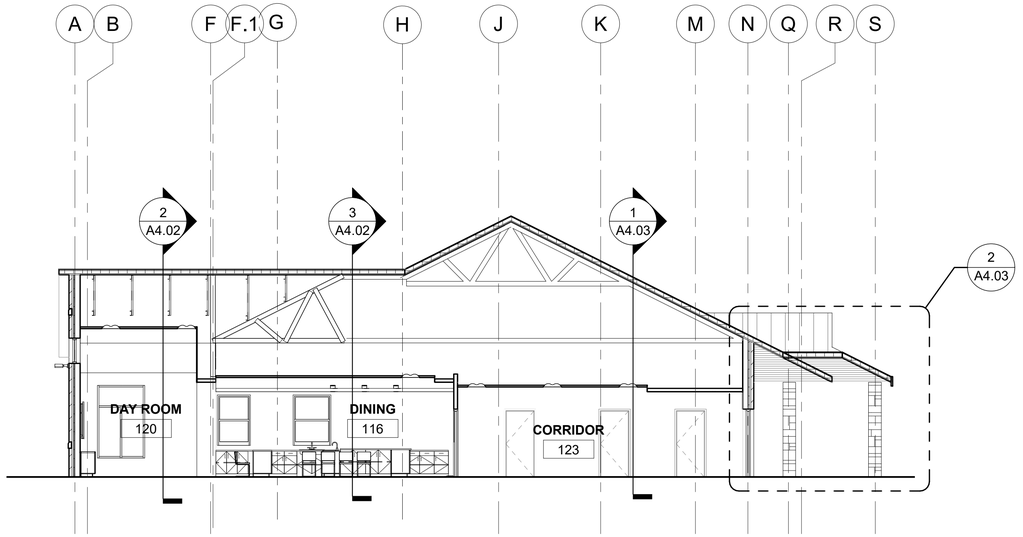
EXTERIOR ELEVATION DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A2.03

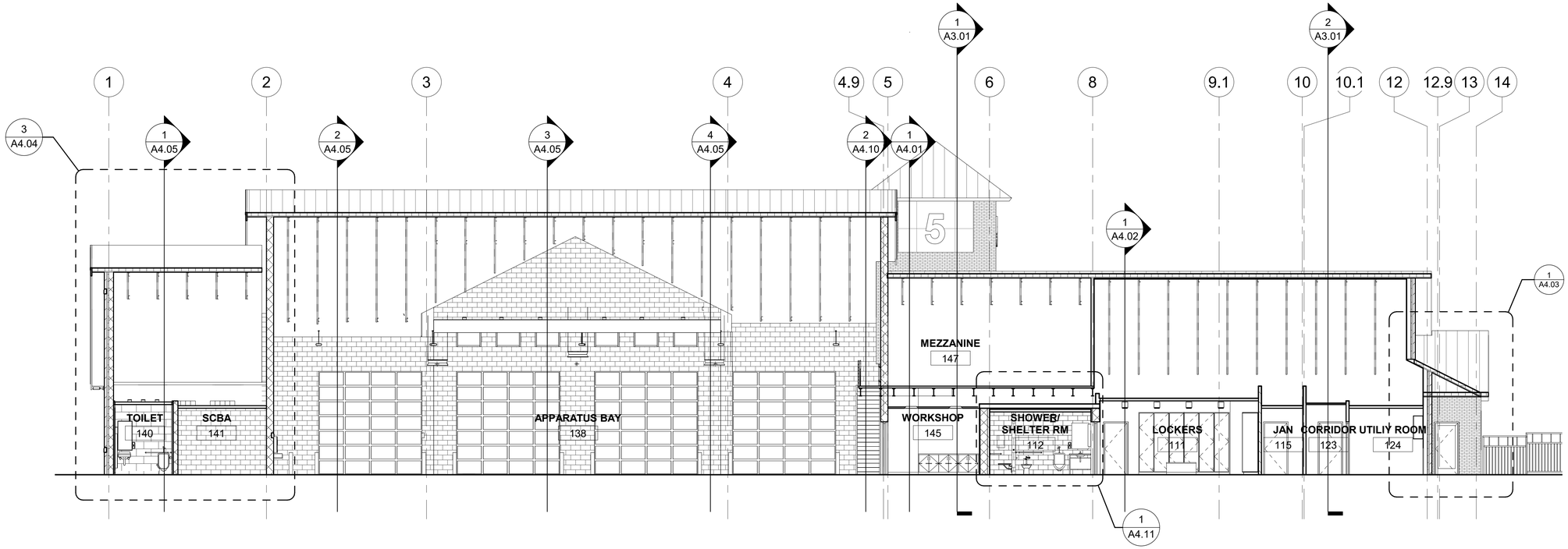
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1 A3.01 BUILDING SECTION
1/8" = 1'-0"



2 A3.01 BUILDING SECTION
1/8" = 1'-0"



3 A3.01 BUILDING SECTION
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

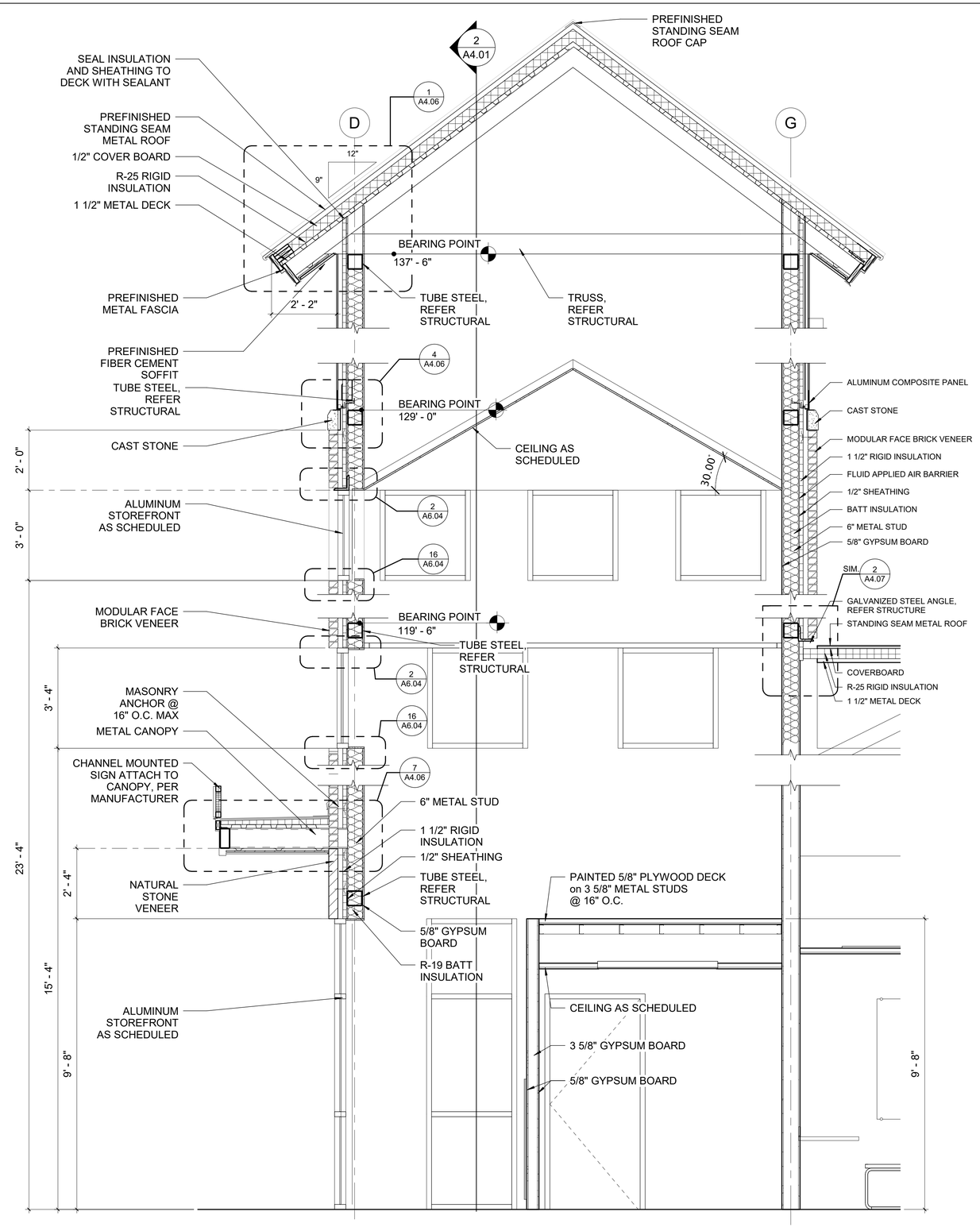
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

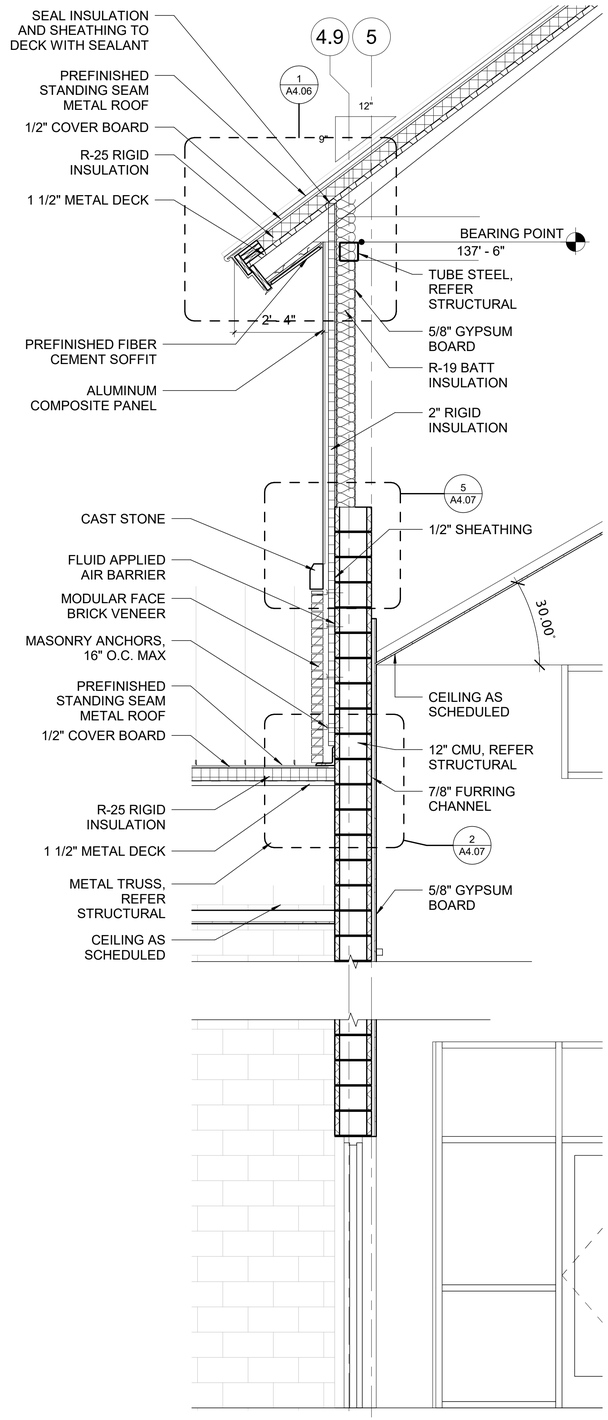
BUILDING SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A3.01

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1 A4.01 WALL SECTION
1/2" = 1'-0"



2 A4.01 WALL SECTION
1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

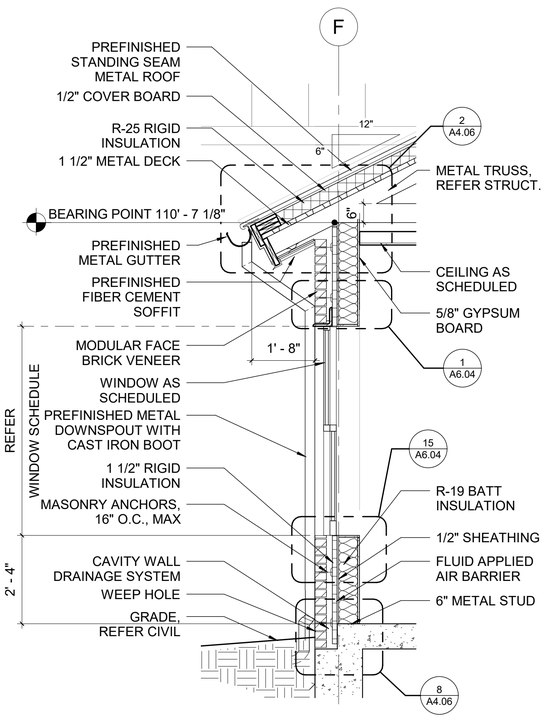
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

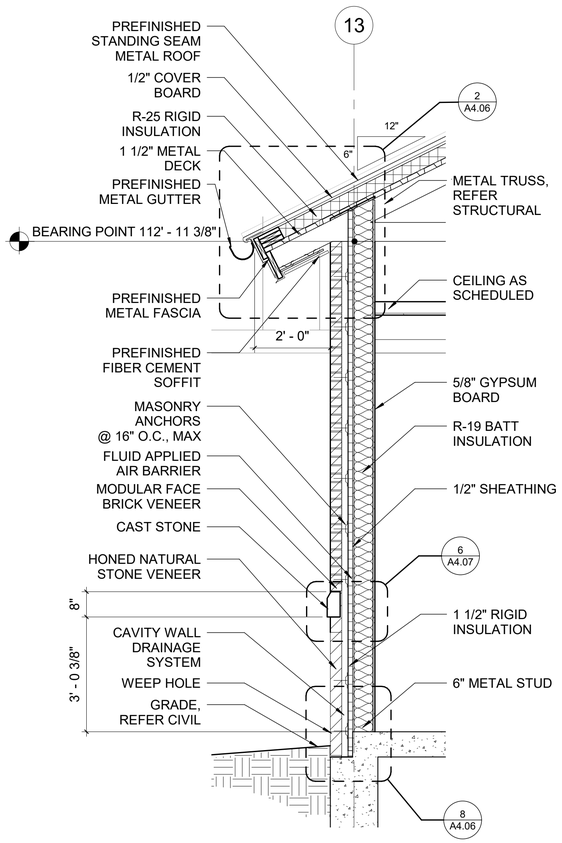
WALL SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.01

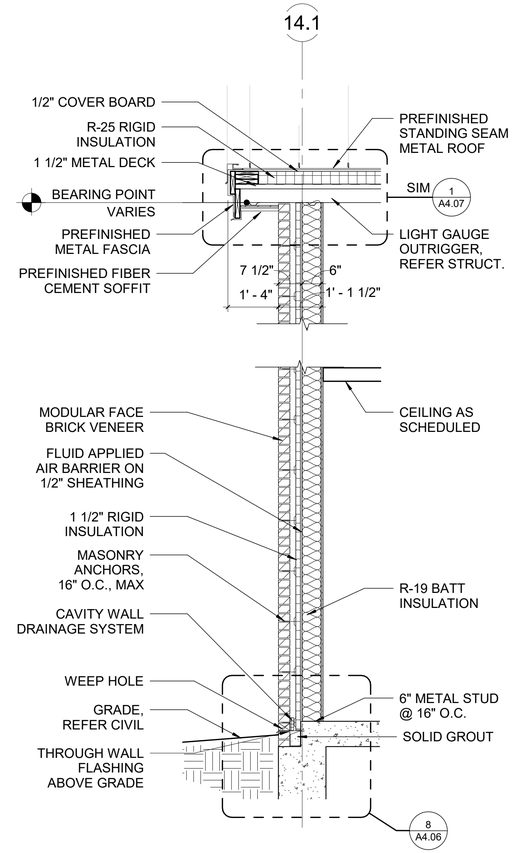
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1 A4.02 WALL SECTION
1/2" = 1'-0"



2 A4.02 WALL SECTION
1/2" = 1'-0"



3 A4.02 WALL SECTION
1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

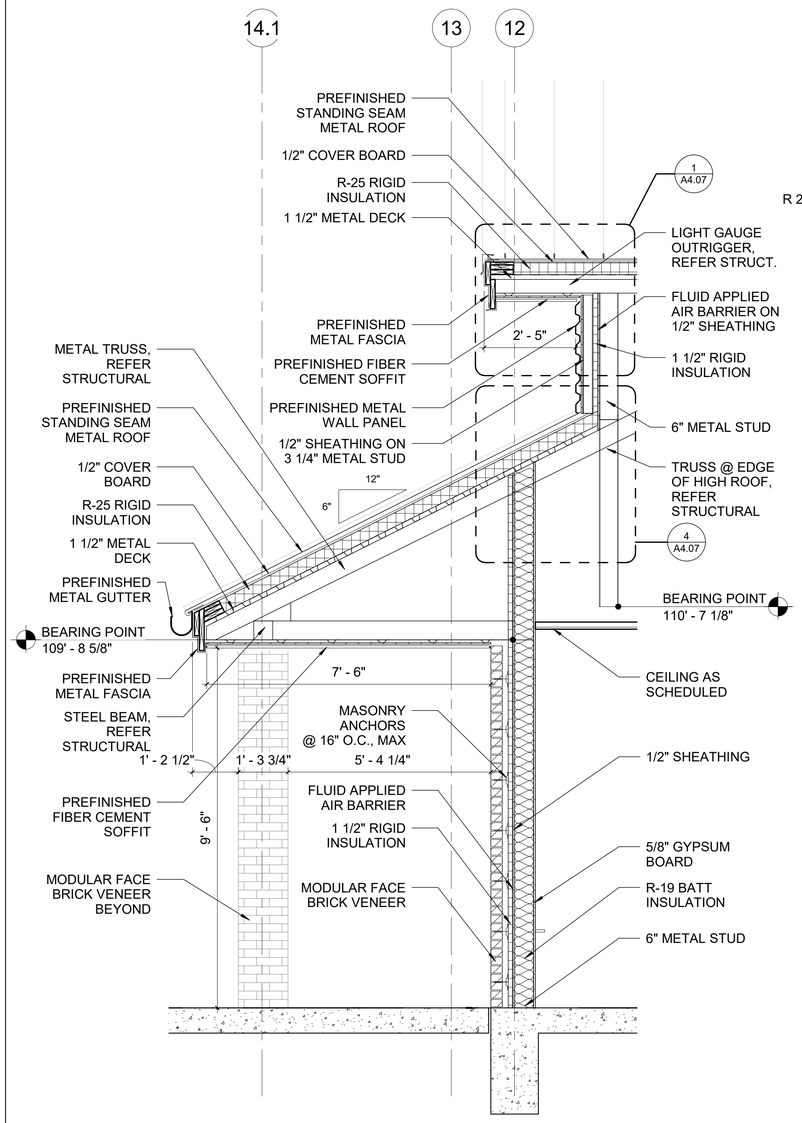
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

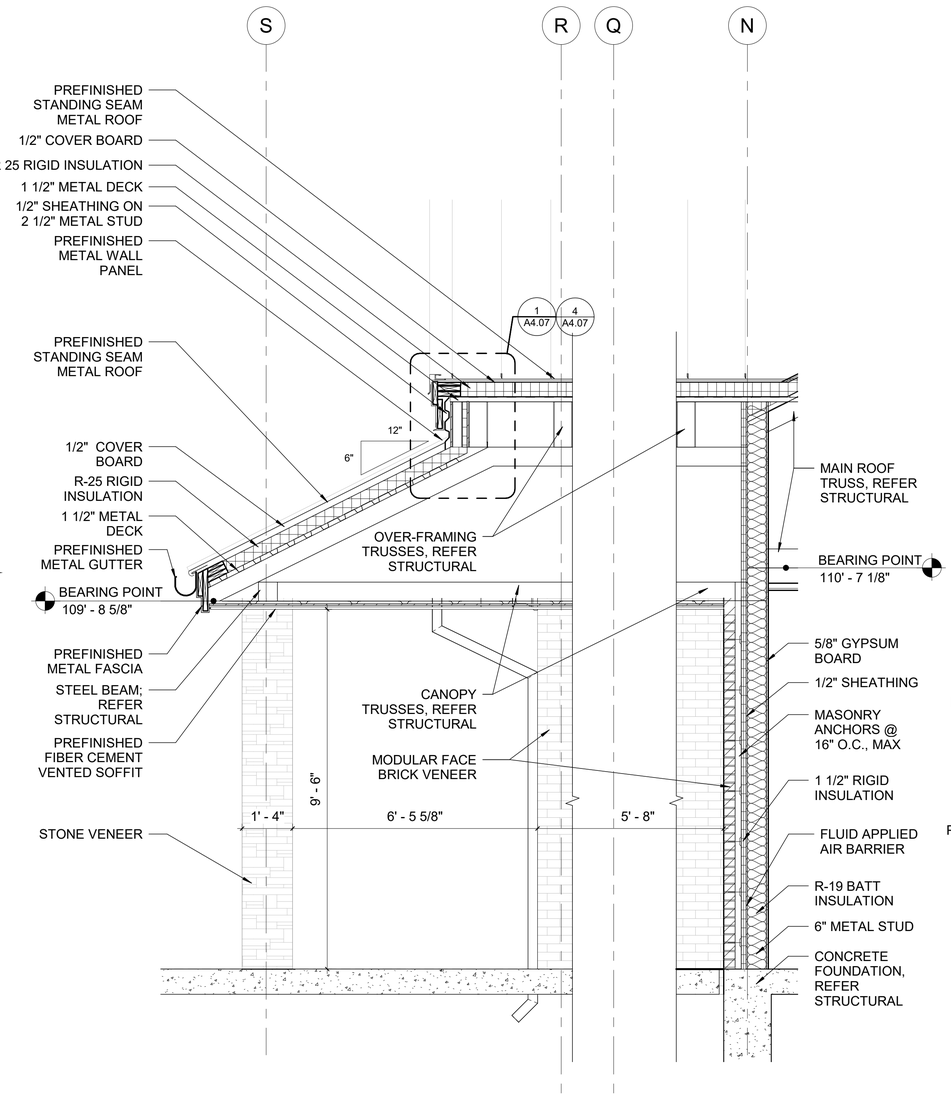
WALL SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.02

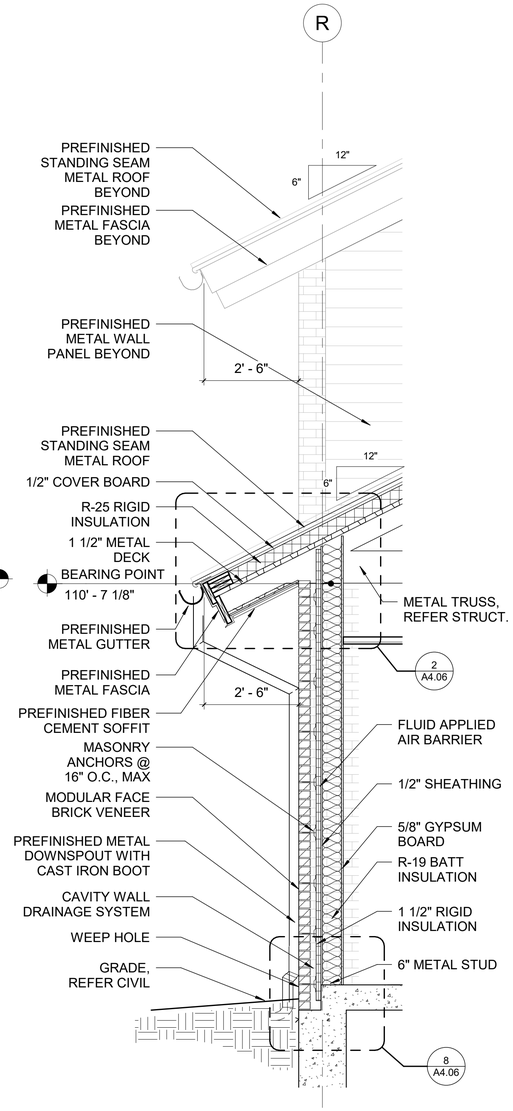
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1 A4.03 WALL SECTION
1/2" = 1'-0"



2 A4.03 WALL SECTION
1/2" = 1'-0"



3 A4.03 WALL SECTION
1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS

ISSUE DATE: 11/07/19

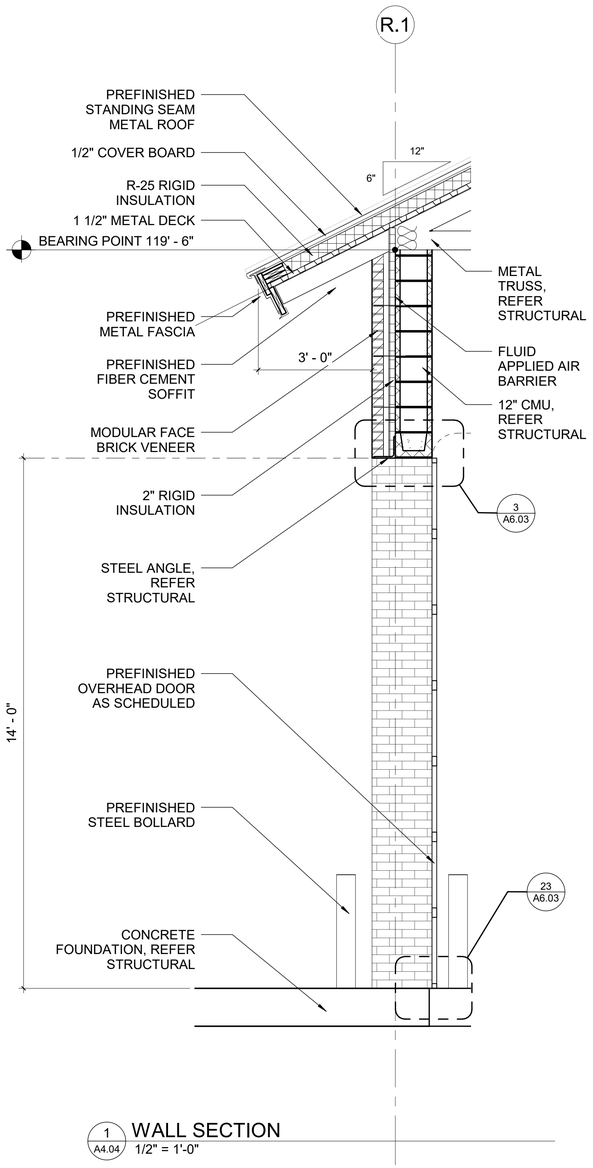
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

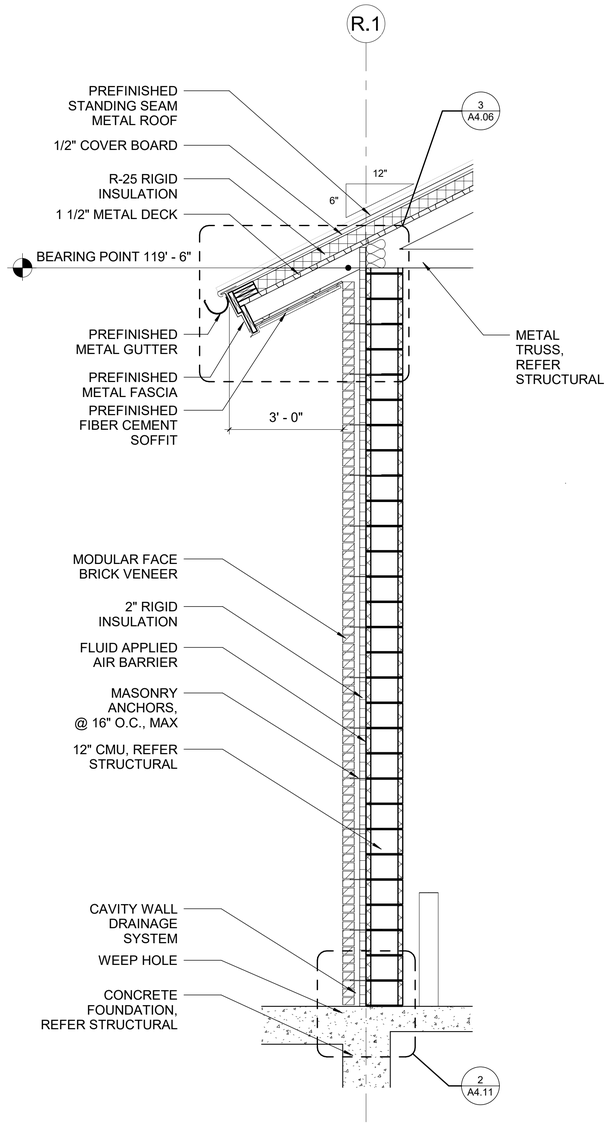
WALL SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.03

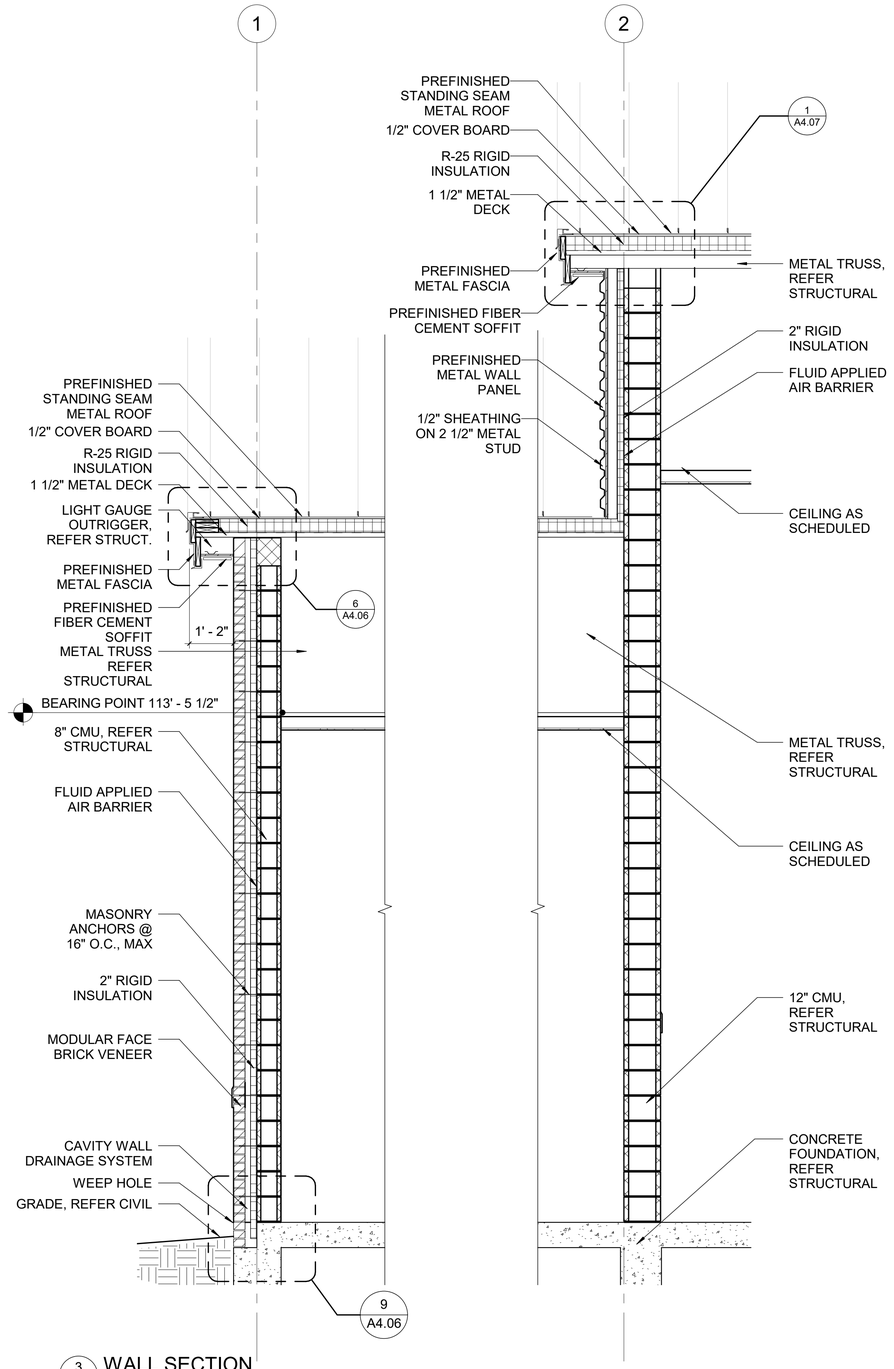
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1 A4.04 WALL SECTION
1/2" = 1'-0"



2 A4.04 WALL SECTION
1/2" = 1'-0"



3 A4.04 WALL SECTION
1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

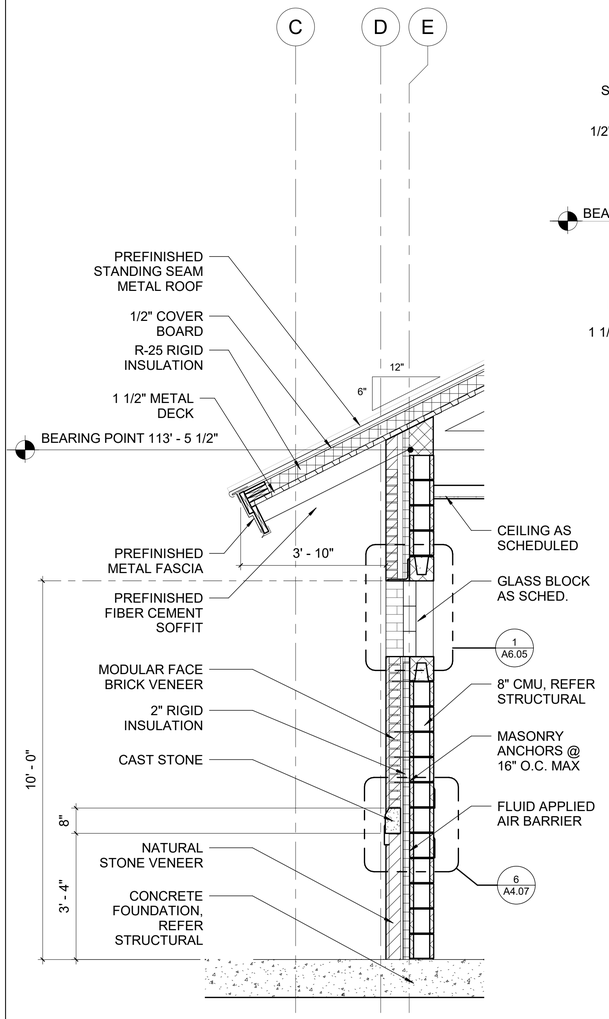
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

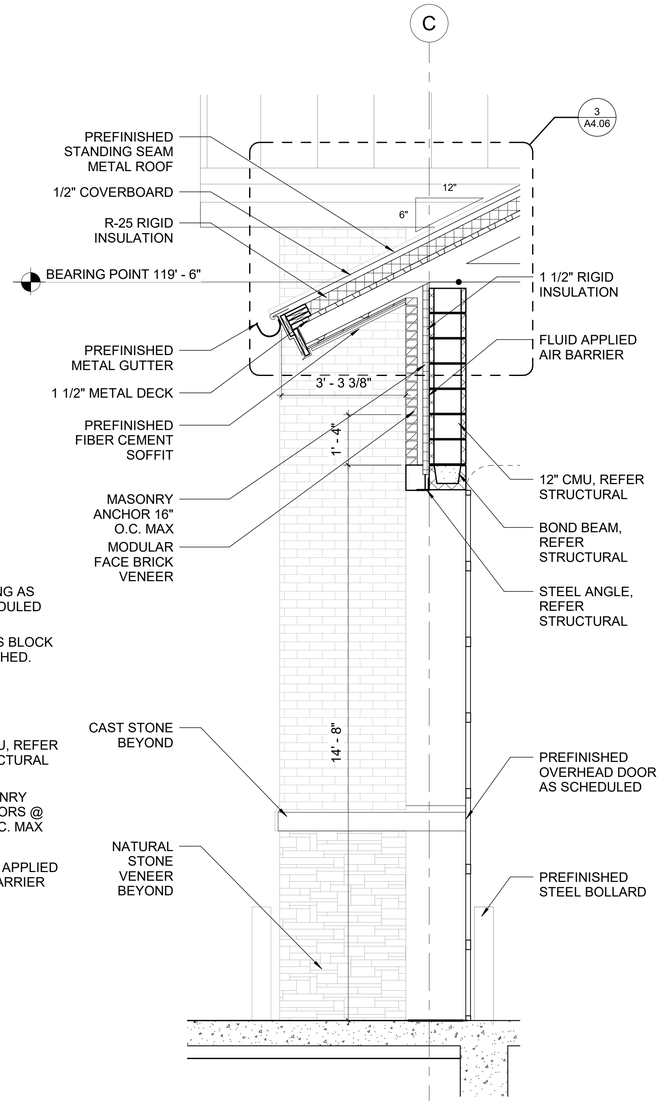
WALL SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.04

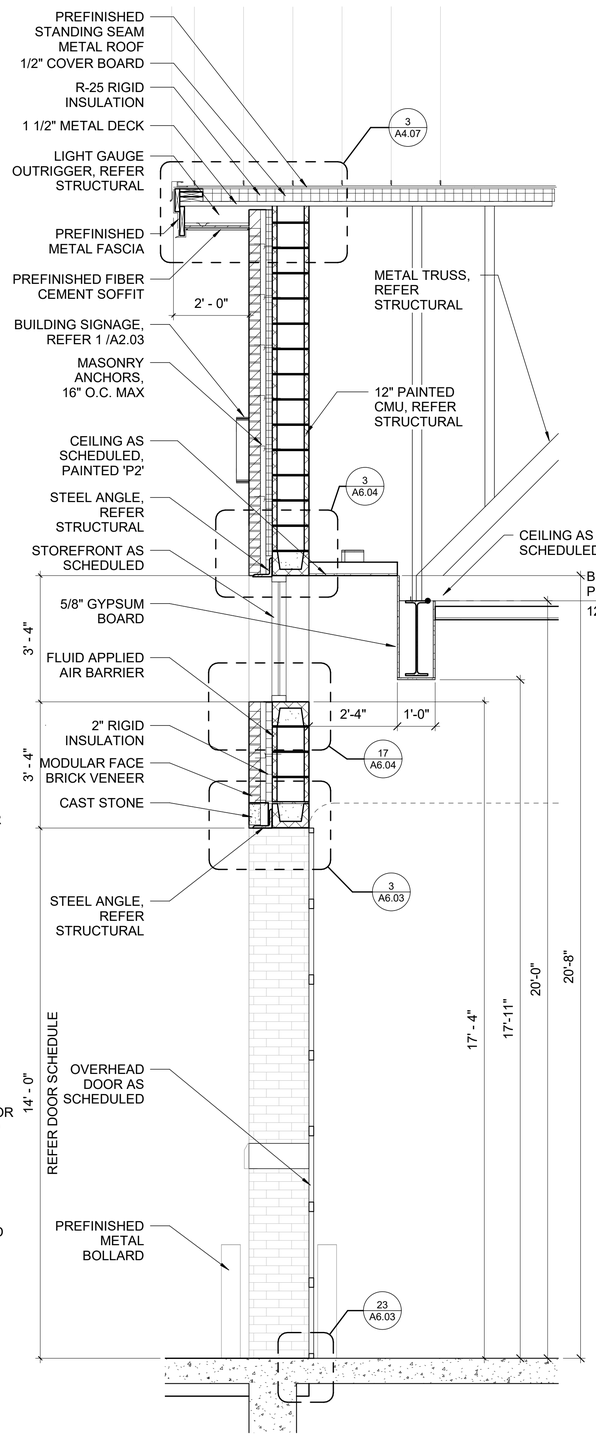
© 2016 Komatsu Architecture, Inc.



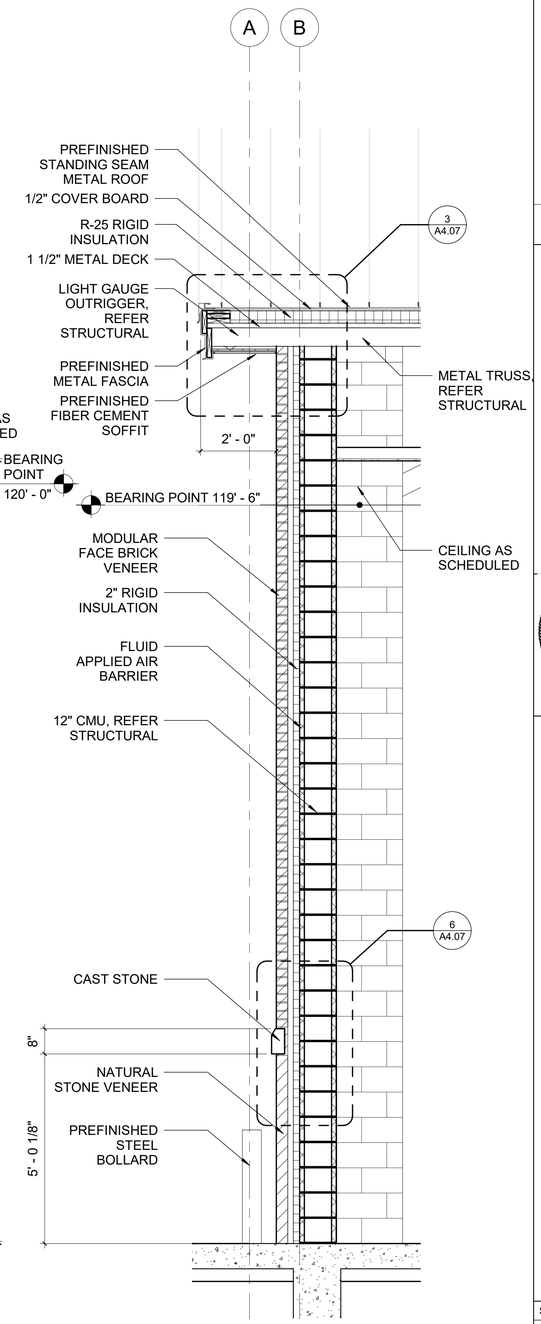
1 A4.05 WALL SECTION
1/2" = 1'-0"



2 A4.05 WALL SECTION
1/2" = 1'-0"



3 A4.05 WALL SECTION
1/2" = 1'-0"



4 A4.05 WALL SECTION
1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/17/19

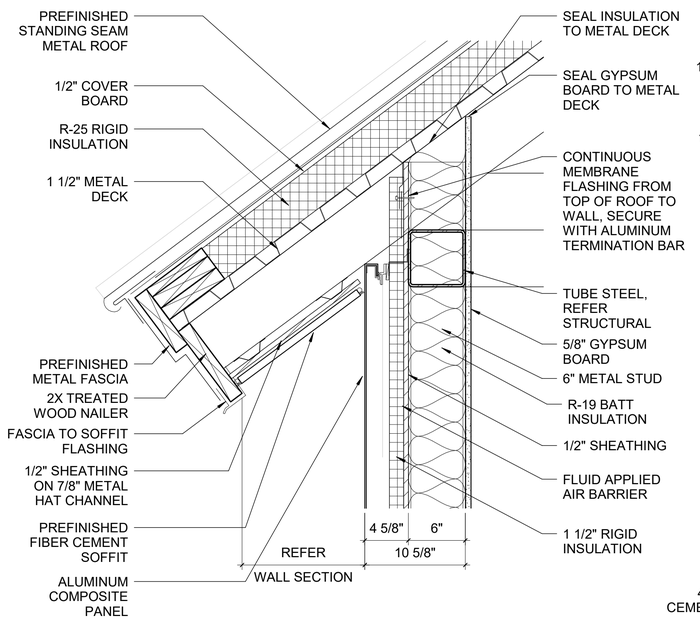
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

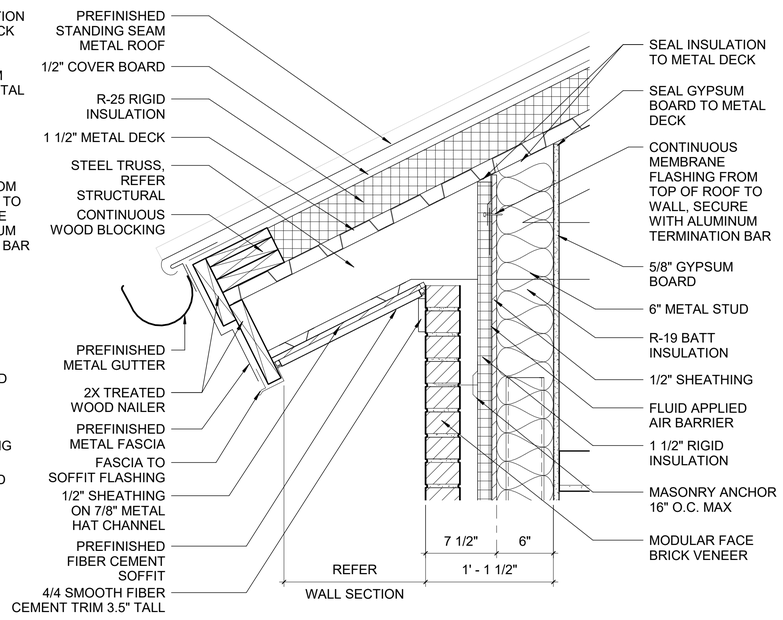
WALL SECTIONS

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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.05

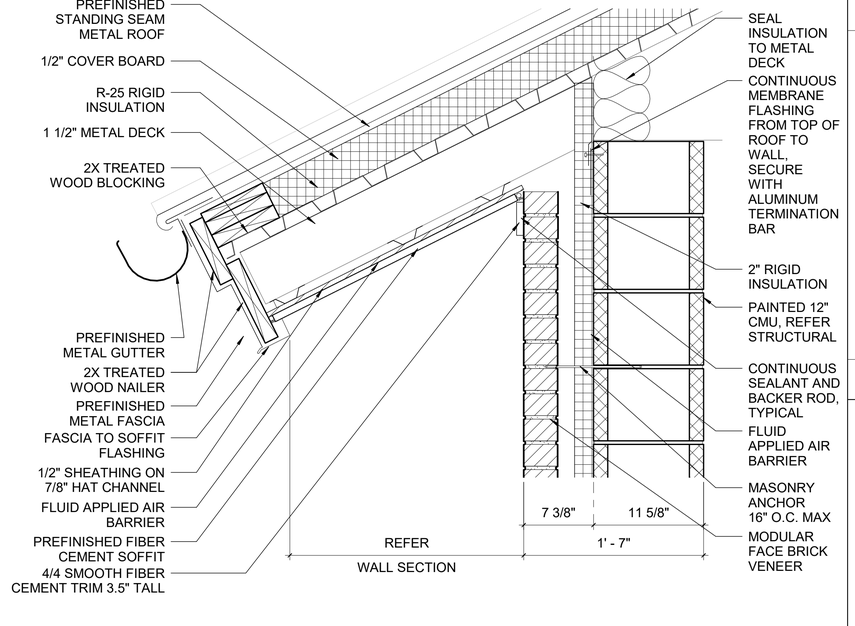
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1 A4.06 SECTION DETAIL
1 1/2" = 1'-0"



2 A4.06 SECTION DETAIL
1 1/2" = 1'-0"

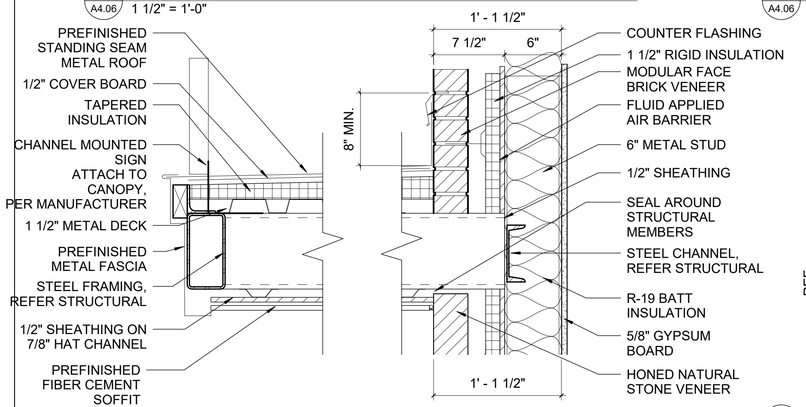


3 A4.06 SECTION DETAIL
1 1/2" = 1'-0"

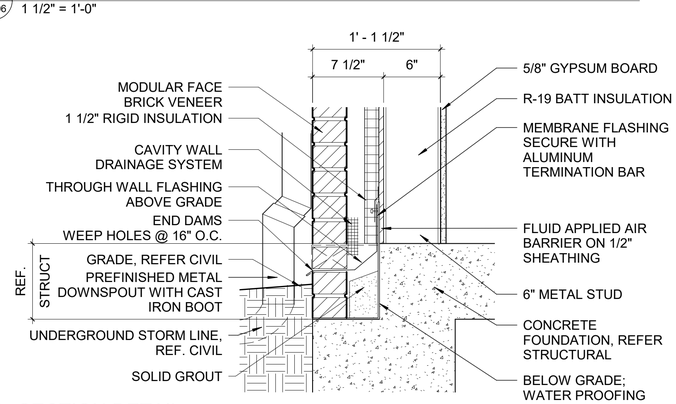
4 A4.06 SECTION DETAIL
1 1/2" = 1'-0"

5 A4.06 SECTION DETAIL
1 1/2" = 1'-0"

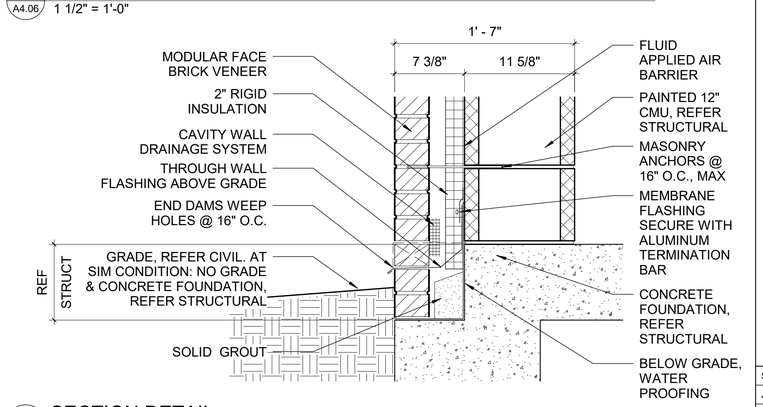
6 A4.06 SECTION DETAIL
1 1/2" = 1'-0"



7 A4.06 SECTION DETAIL
1 1/2" = 1'-0"



8 A4.06 SECTION DETAIL
1 1/2" = 1'-0"



9 A4.06 SECTION DETAIL
1 1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

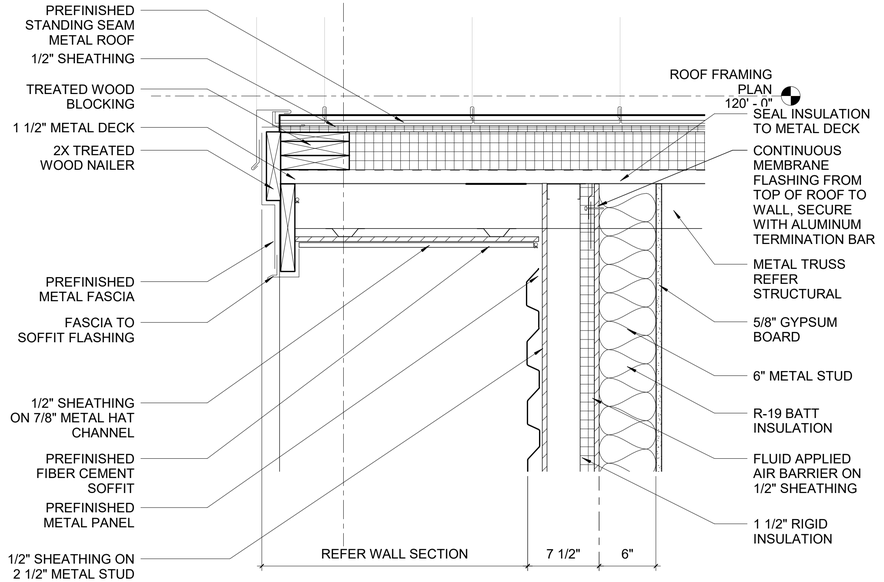
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

SECTION DETAILS

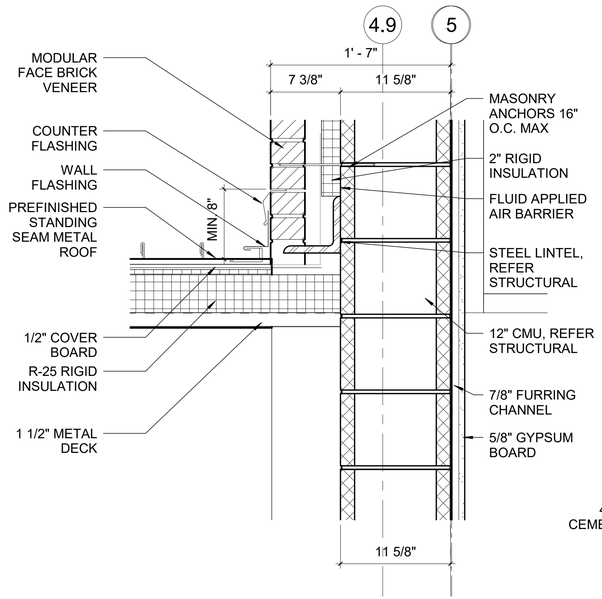
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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.06

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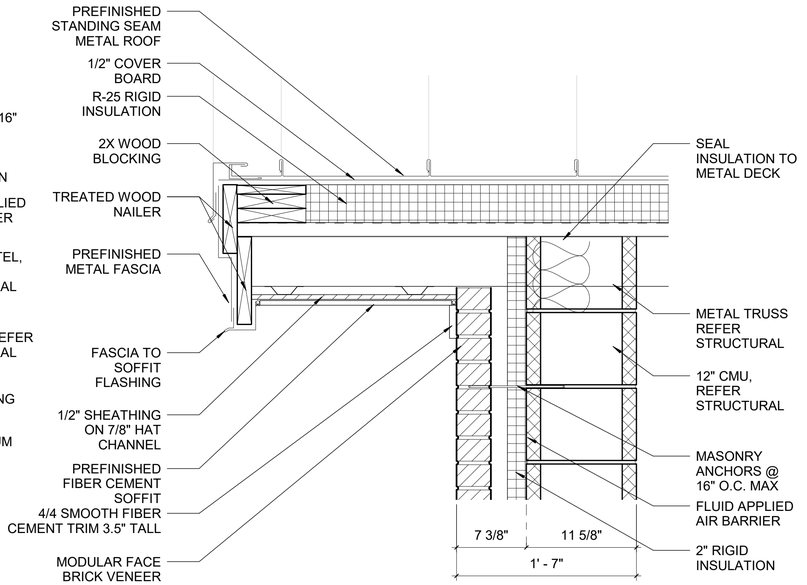


NOTE: AT SIMILAR CONDITION, WALL IS BRICK ON METAL STUD CONSTRUCTION, REFER TO WALL SECTION FOR WALL CONSTRUCTION

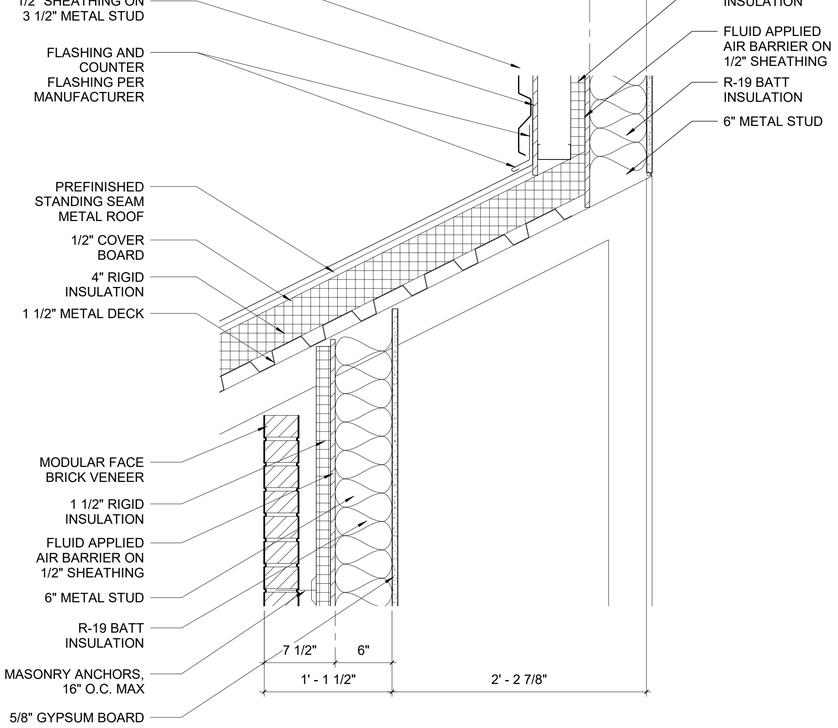
1 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"



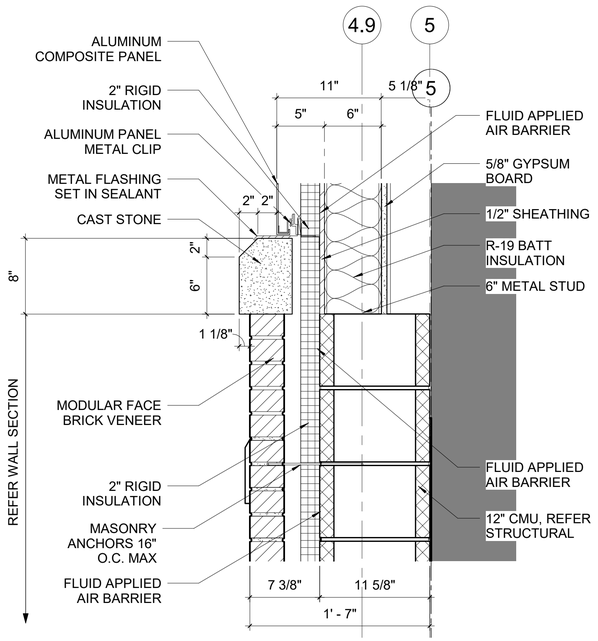
2 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"



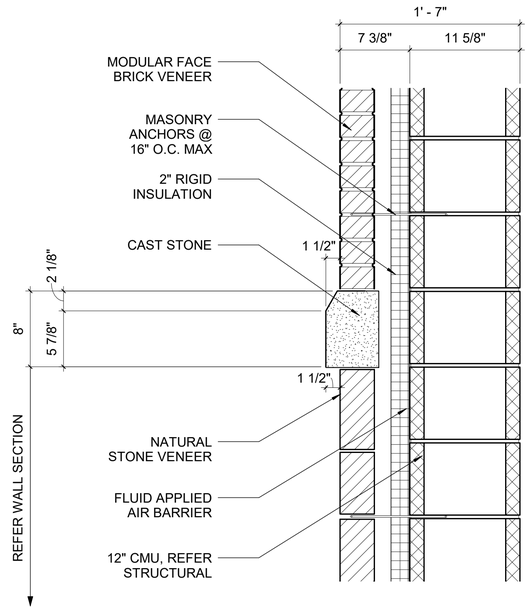
3 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"



4 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"



5 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"



6 / A4.07 SECTION DETAIL
1 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS
ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

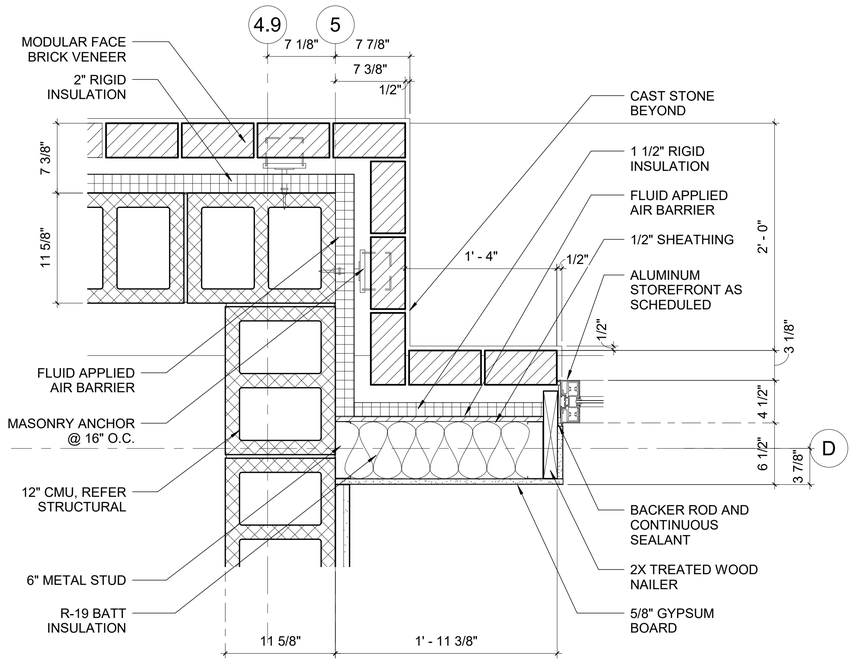
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

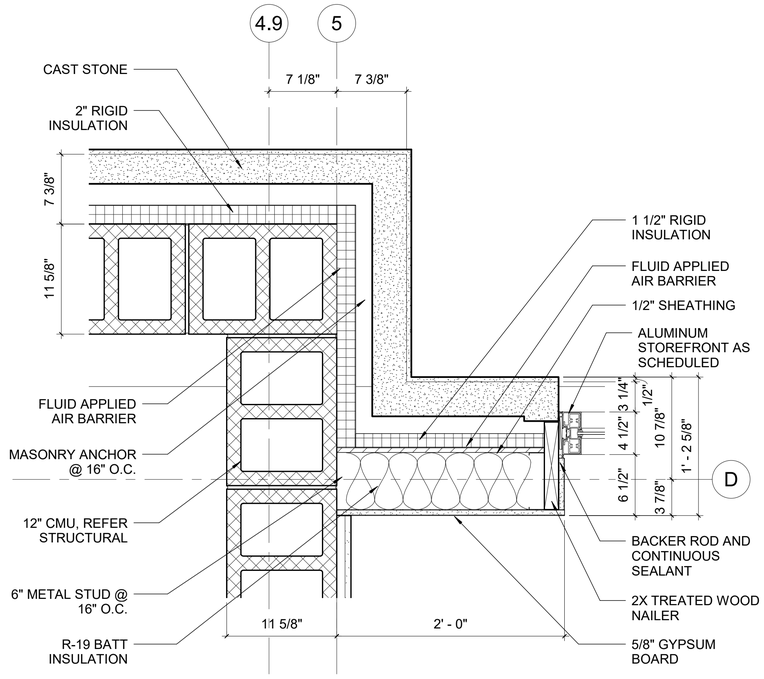
SECTION DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.07

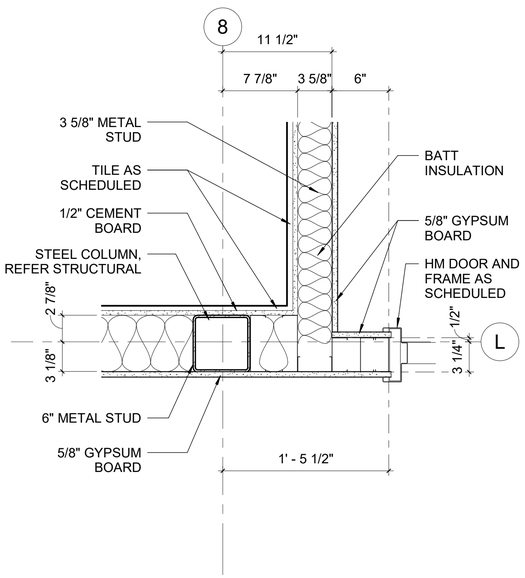
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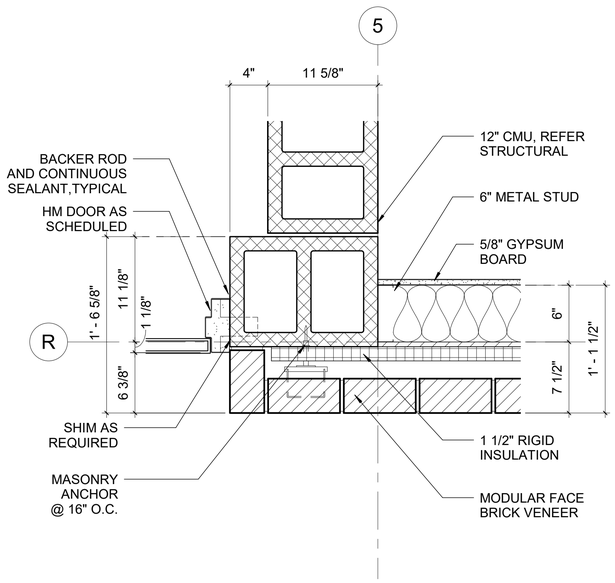
1 A4.08 PLAN DETAIL
1 1/2" = 1'-0"



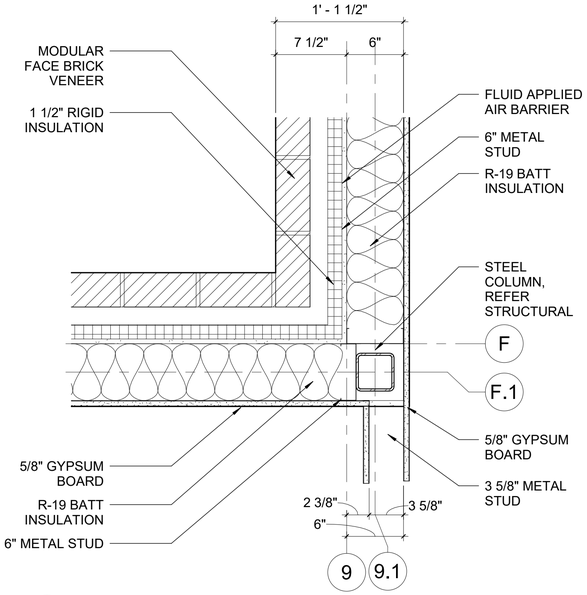
2 A4.08 PLAN DETAIL
1 1/2" = 1'-0"



3 A4.08 PLAN DETAIL
1 1/2" = 1'-0"



4 A4.08 PLAN DETAIL
1 1/2" = 1'-0"



5 A4.08 PLAN DETAIL
1 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

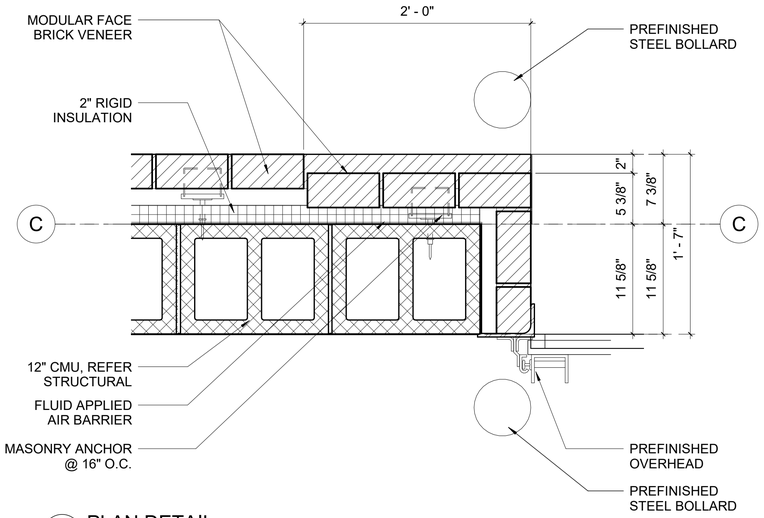
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

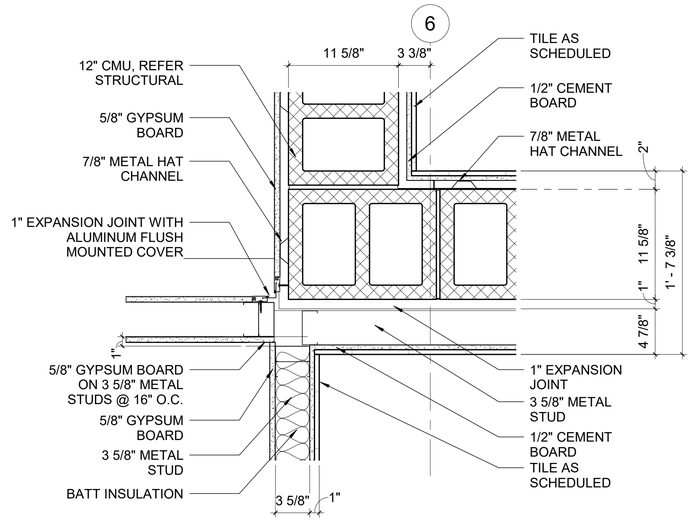
PLAN DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.08

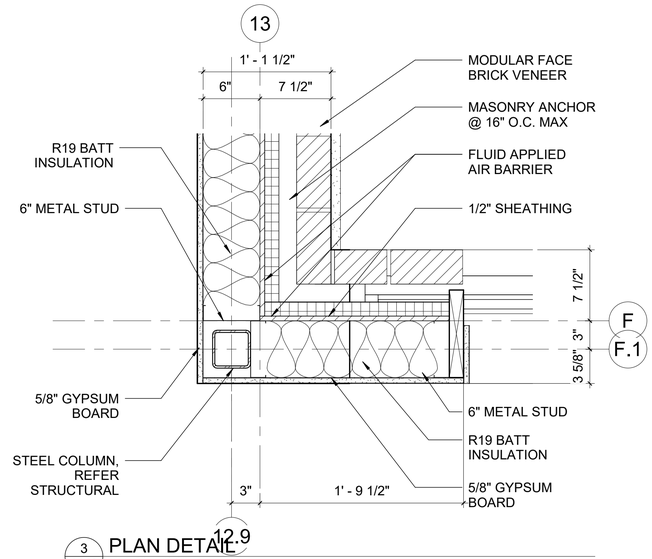
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1 A4.09 PLAN DETAIL
1 1/2" = 1'-0"



2 A4.09 PLAN DETAIL
1 1/2" = 1'-0"



3 A4.09 PLAN DETAIL
1 1/2" = 1'-0"

4 A4.09 PLAN DETAIL
1 1/2" = 1'-0"

5 A4.09 EJ DETAIL
1 1/2" = 1'-0"

6 A4.09 EJ DETAIL
1 1/2" = 1'-0"

7 A4.09 PLAN DETAIL
1 1/2" = 1'-0"

8 A4.09 EJ DETAIL
1 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

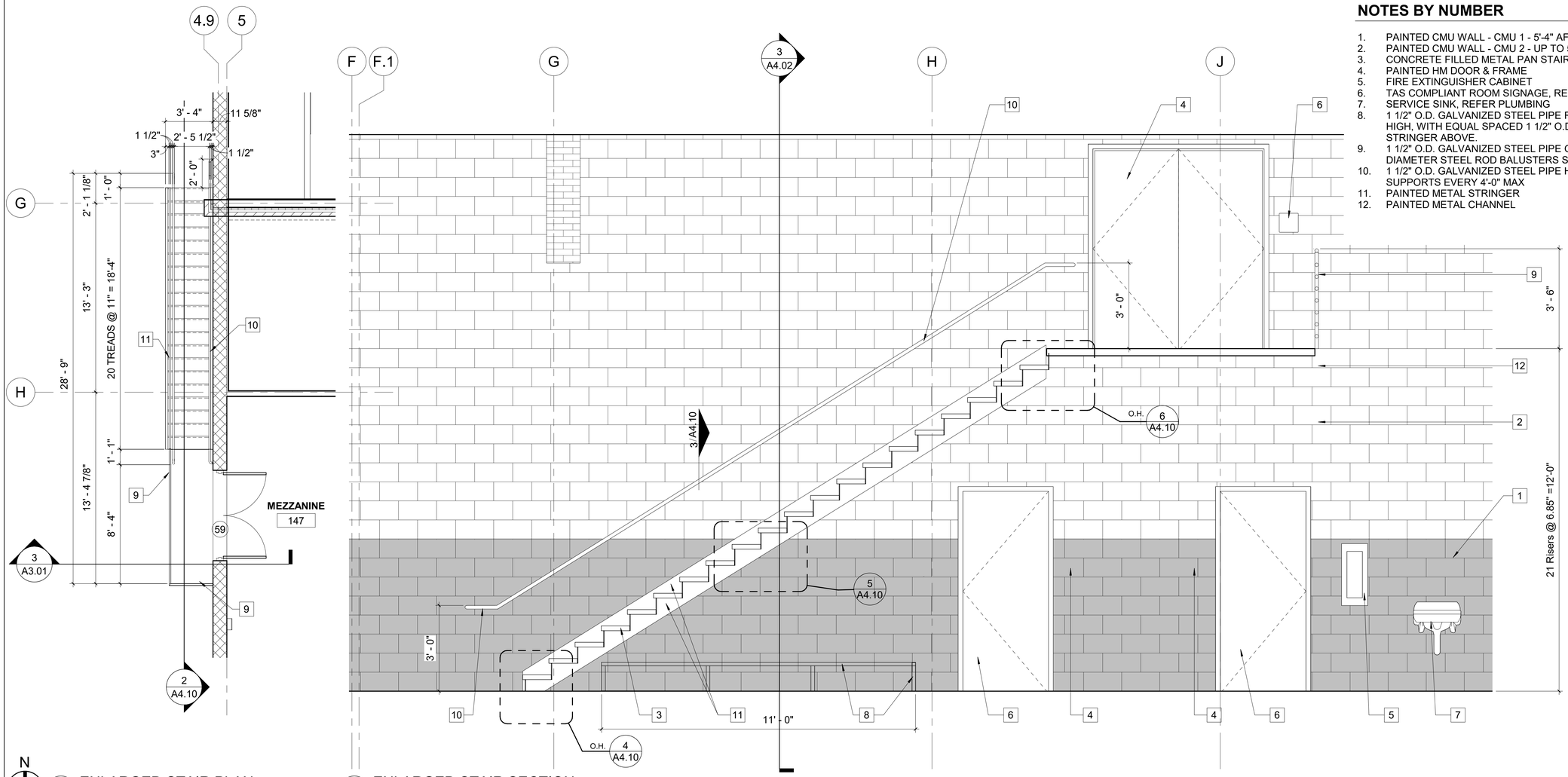
PLAN DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.09

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NOTES BY NUMBER "X"

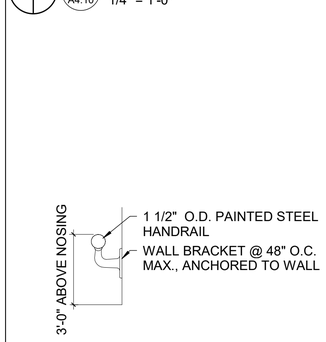
1. PAINTED CMU WALL - CMU 1 - 5'-4" AFF TO TOP OF STRUCTURE
2. PAINTED CMU WALL - CMU 2 - UP TO 5'-4" AFF
3. CONCRETE FILLED METAL PAN STAIRS
4. PAINTED HM DOOR & FRAME
5. FIRE EXTINGUISHER CABINET
6. TAS COMPLIANT ROOM SIGNAGE, REFER A6.01
7. SERVICE SINK, REFER PLUMBING
8. 1 1/2" O.D. GALVANIZED STEEL PIPE RAIL (FOR CANE DETECTION), 12" HIGH, WITH EQUAL SPACED 1 1/2" O.D. SUPPORTS, ALIGN WITH STAIR STRINGER ABOVE.
9. 1 1/2" O.D. GALVANIZED STEEL PIPE GUARDRAIL (42" HIGH) WITH 1/2" DIAMETER STEEL ROD BALUSTERS SPACED 4" O.C. MAX
10. 1 1/2" O.D. GALVANIZED STEEL PIPE HANDRAIL (36" HIGH) WITH SUPPORTS EVERY 4'-0" MAX
11. PAINTED METAL STRINGER
12. PAINTED METAL CHANNEL



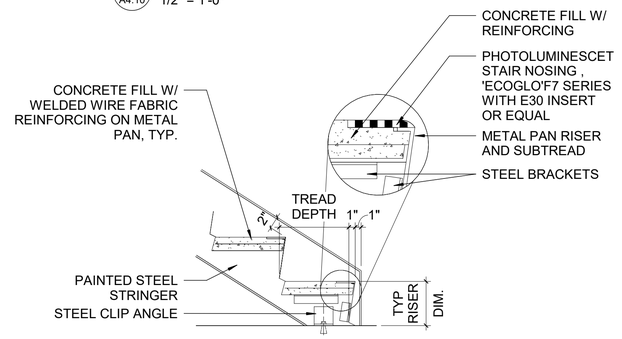
N

1 A4.10 ENLARGED STAIR PLAN
1/4" = 1'-0"

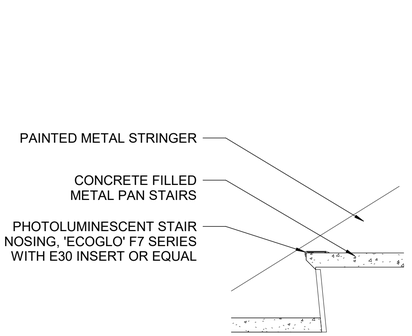
2 A4.10 ENLARGED STAIR SECTION
1/2" = 1'-0"



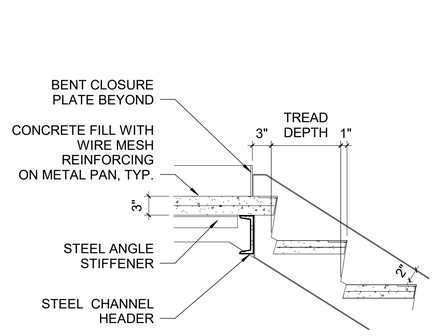
3 A4.10 HANDRAIL DETAIL
1 1/2" = 1'-0"



4 A4.10 STRINGER TO SLAB
1" = 1'-0"



5 A4.10 STAIR DETAIL
1 1/2" = 1'-0"



6 A4.10 STAIR LANDING
1" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

2' 0 2' 4' 8'
GRAPHIC SCALE: 1/4" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

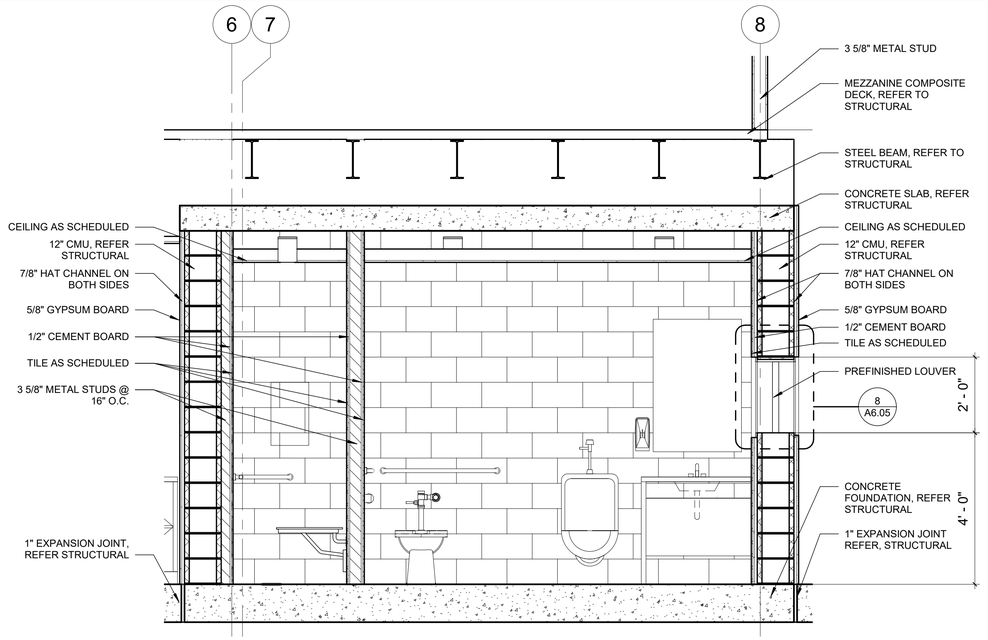
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

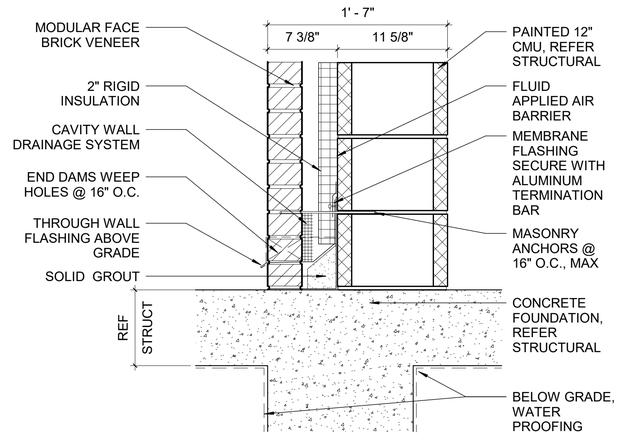
ENLARGED STAIR PLAN, SECTION & DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.10

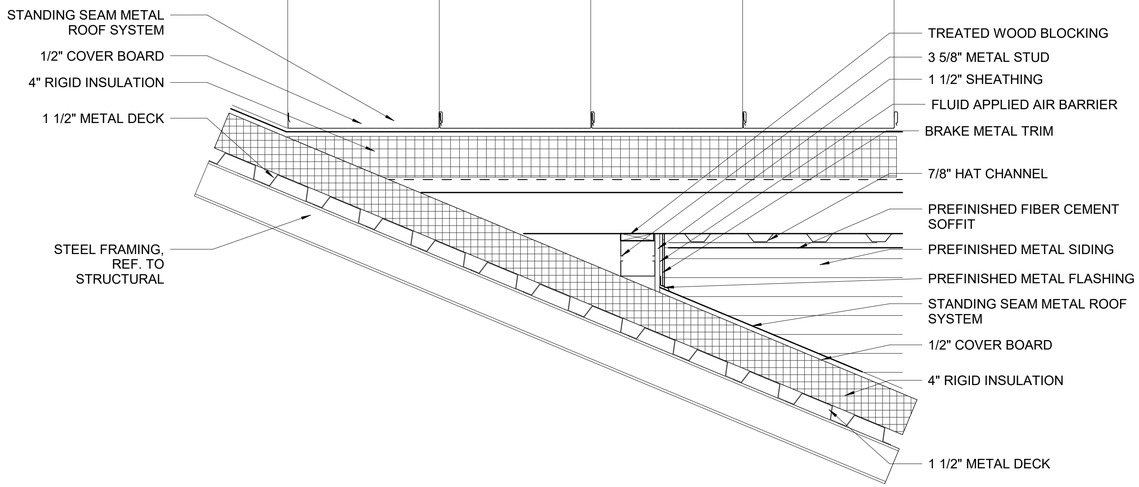
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1 A4.11 TORNADO SHELTER SECTION
1/2" = 1'-0"



2 A4.11 SECTION DETAIL
1 1/2" = 1'-0"



3 A4.11 ROOF CONNECTION DETAIL
1 1/2" = 1'-0"

1' 0 1' 2' 4'
GRAPHIC SCALE: 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

SECTION DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A4.11

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Level	SPACE NUMBER	SPACE ROOM NAME	FLOOR	BASE	WALL N	WALL E	WALL S	WALL W	CEILING MAT'L	CEILING HEIGHT	REMARKS BY NUMBER
Level 1											
Level 1	101	VESTIBULE	RT/EM	RB2	P1,6	P3,6	P3,4,6	P1,4,6	P6	9'-0"	1, 5,7
Level 1	102	TREATMENT	RT	RB2	P1	P1	P2	P2	AC	9'-0"	
Level 1	103	CORRIDOR	RT	RB2	P3	P3	P2	P2	AC/P4	9'-6"	7
Level 1	104	REPORTS	RT	RB2	P4	P3	P3	P4	AC	8'-6"	6, 12, 18
Level 1	105	TOILET	CT1	CT2	CT3	CT4	CT3	CT3	P1	9'-6"	1, 6, 13
Level 1	106	STORAGE	RT	RB2	P1	P1	P1	P1	P1	9'-0"	
Level 1	107	CORRIDOR	RT	RB2	P3	-	P2	P2	AC/P4	9'-6"	7
Level 1	108	OFFICE	C	RB1	P4	P2	P2	P5	AC	9'-0"	17, 18
Level 1	109	DORM	C	RB1	P4	P4	P2	P2	AC	10'-0"	6, 13, 20
Level 1	110	SHOWER	CT1	CT2	CT4	CT3	CT3, 7	CT3	P1	9'-6"	1, 3, 6, 21
Level 1	111	LOCKERS	RT	RB2	P1	P1,4	P1,2,4	P2	P1	10'-0"	2, 11
Level 1	112	SHOWER/ SHELTER RM	CT1	CT2	CT3, 4	CT3, 7	CT3	CT3	P1	8'-6"	3, 6, 13, 21
Level 1	113	TOILET	CT1	CT2	CT7	CT3	CT4	CT3	P1	9'-6"	6, 13
Level 1	114	SHOWER	CT1	CT2	CT3	CT3	CT3, 4	CT3	P1	9'-6"	3, 21
Level 1	115	JAN	RT	RB2	P1	P1	P1/CT6	P1/CT6	P1	9'-0"	22
Level 1	116	DINING	RT	RB2	-	-	P2,5/CT4	P3	AC/P4	VARIES	7
Level 1	117	PANTRY	RT	RB2	P1	P1	P1	P1	P1	9'-0"	23
Level 1	118	PANTRY	RT	RB2	P1	P1	P1	P1	P1	9'-0"	23
Level 1	119	PANTRY	RT	RB2	P1	P1	P1	P1	P1	9'-0"	23
Level 1	120	DAY ROOM	C	RB1	P2	P4	P4	P	P1	VARIES	6, 7
Level 1	121	KITCHEN	RT	RB2	P4	P4 / CT5 / SS	P5	P5	P2	VARIES	7, 8, 9, 10
Level 1	122	STORAGE	RT	RB2	P1	P1	P1	P1	P1	9'-0"	
Level 1	123	CORRIDOR	RT	RB2	P1	P4	P4	P2	AC/P4	VARIES	5, 7, 14
Level 1	124	UTILIY ROOM	RT	RB2	P1	P2	P4	P1	P1	9'-0"	13
Level 1	125	DORM	C	RB1	P2	P4	P4	P2	AC	9'-0"	4, 6, 20
Level 1	127	DORM	C	RB1	P2	P4	P4	P2	AC	9'-0"	4, 6, 20
Level 1	128	CORRIDOR	RT	RB2	P1	-	P2	P2	AC/P4	VARIES	7, 14
Level 1	129	LOCKERS	RT	RB2	P1	P2	P2	P1	P1	10'-0"	2, 11
Level 1	130	SHOWER	CT1	CT2	CT3, 7	CT3, 4	CT3	CT3	P1	9'-6"	3, 6, 13, 21
Level 1	131	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	132	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	133	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	134	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	135	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	136	DORM	C	RB1	P2	P2	P4	P4	AC	10'-0"	4, 6, 20
Level 1	137	VESTIBULE	EM	RB1	P1	P2	P2	P1	P1	9'-0"	4, 6, 20
Level 1	138	DECON	CC	RB2	P1	P1	P1	P1	AC	9'-0"	
Level 1	138	APPARATUS BAY	CC	CMU	CMU1,2,3	CMU1,2	CMU1,2	CMU1,2	P1	VARIES	15, 17
Level 1	139	WORKOUT	SF	RB2	CMU3/CT7	CMU1	CMU1	CMU2/M	P1	13'-0"	
Level 1	140	TOILET	CT1	CT2	CT4	CT3	CT3	CT3	P1	9'-6"	
Level 1	141	SCBA	CC	RB2	CMU1	CMU1	CMU1	CMU1	P1	9'-0"	
Level 1	142	EXTRACTOR	CC	RB2	CMU1	CMU1	CMU1	CMU1,2	P1	9'-0"	
Level 1	143	GEAR	CC	RB2	CMU1	CMU1	CMU1	CMU3	P1	9'-0"	
Level 1	144	VESTIBULE	EM/CT4	RB1 / CT2	P1	P2/CT7	P2/CT7	P1/CT7	P1	9'-0"	5, 7, 19
Level 1	145	WORKSHOP	CC	RB2	P2	P1	P1	P1,2	AC	9'-0"	16
Level 1	146	MEDS	CC	RB2	P1	P1	P1	P1	AC	9'-0"	
Level 2											
Level 2	147	MEZZANINE	CC	RB2	P1	P1	P1	CMU1	-	EXPOSED	

REMARKS BY NUMBER

1. NO WINDOW SHADE THIS ROOM
2. STAINED WOOD WARDROBE UNIT 'WS'
3. SHOWER STALL FLOOR TILE 'CT2'.
4. WINDOW SHADES 'SH1' AND SH2' WITH JAMB TRACK AT WINDOWS THIS ROOM
5. REFER A8.01 FOR LOCATION OF ENTRY MAT 'EM'
6. STAINED WOOD CABINET 'WS' WITH SOLID SURFACE 'SM' COUNTERTOP AND CABINET END
7. SCUFF RESISTANT PAINT THIS ROOM
8. STAINED WOOD CABINET 'WS' WITH SOLID SURFACE 'SM' COUNTER TOP AND 'CT5' SPLASH
9. STAINED WOOD ISLAND 'WS' WITH SOLID SURFACE 'SS' COUNTERTOP
10. 'SS' CLAD WALL AT RANGE
11. SOFFIT ABOVE WARDROBE UNITS TO MATCH ADJACENT WALL SURFACE
12. PAINT METAL COUNTER SUPPORT BRACKETS TO MATCH ADJACENT WALL SURFACE
13. STAINED WOOD CUBBIES 'WS'
14. CHAIR RAIL 'WS'
15. PAINT ALL METAL STAIR COMPONENTS 'PM'
16. STAINED WOOD CABINET 'WS' WITH SEALED SOLID OAK BUTCHER BLOCK COUNTER TOP
17. WAINSCOT 'CMU2' WITH 'CMU1' ABOVE
18. MAGNETIC MARKER BOARD 'MB' THIS ROOM
19. CERAMIC TILE FLOOR AND WALL @ ICE MACHINE
20. STAINED WOOD 'WS' BED PLATFORM
21. SHOWER SOAP/SHAMPOO SHELF INSET BACK WALL 'CT7'
22. 'CT6' WAINSCOT AT MOP SINK
23. STAINED WOOD SHELVING 'WS'

GENERAL NOTES

A. REFER TO INTERIOR ELEVATIONS, REFLECTED CEILING PLANS, AND SHEET A8.01 FOR COLOR INDICATIONS, FINISH INDICATIONS, AND CEILING HEIGHT CLARIFICATIONS
B. PAINT ALL HOLLOW METAL DOOR FRAMES 'PM'
C. PAINT ALL INTERIOR HOLLOW METAL DOORS 'PM'
D. ALL WOOD UTILITY SHELVING 'WS' UNLESS NOTED OTHERWISE
E. ALL WOOD CABINETS 'WS' UNLESS OTHERWISE NOTED
F. GYPSUM WALL BOARD TEXTURE TO BE ROLLED LIGHT ORANGE PEEL UNLESS NOTED OTHERWISE
G. STRAIGHT BASE 'RB1' AT CARPET
H. STRAIGHT BASE WITH QUARTER ROUND TRIM 'RB2' AT HARD SURFACE FLOORS
I. USE EGGSHELL PAINT AT WALLS
J. USE FLAT PAINT AT CEILINGS
K. USE SEMI GLOSS AT PAINTED METAL
L. WOOD DOORS 'WS' UNLESS NOTED OTHERWISE
M. WINDOW SHADE 'SH1' AT ALL EXTERIOR WINDOWS UNLESS NOTED OTHERWISE
N. ALL COVER PLATES TO BE 'ALMOND' UNLESS NOTED OTHERWISE
O. STONE THRESHOLD TO MATCH 'CT1'
P. TRANSITION STRIPS COLOR TO MATCH 'RB'
Q. INSTALL ALL 'RT' FLOORING EAST/WEST UNLESS OTHERWISE NOTED
R. INSTALL ALL 'C' AND 'CT' FLOORING NORTH/SOUTH UNLESS OTHERWISE NOTED
S. USE 'GR1' WITH FLOOR AND BASE TILE UNLESS NOTED OTHERWISE
T. USE 'GR2' WITH WALL AND ACCENT TILE UNLESS NOTED OTHERWISE
U. PAINT EXTERIOR BOLLARDS 'PM'.
V. PAINT INTERIOR BOLLARDS 'PM'
W. PAINT FURRDOWNS ABOVE MILLWORK SAME COLOR AS WALL COLOR

ROOM FINISH AND COLOR SCHEDULE LEGEND

AC — ACOUSTIC CEILING TILE - ARMSTRONG
2 X 2 OPTIMA SQUARE LAY-IN

C — CARPET TILE - BENTLEY
RITUAL COLOR GROUNDED #800226
ASHLAR INSTALLATION

CC — CONCRETE
1. HARDENED AND SEALED
2. COATED

CG — CORNER GUARD
1. 2" LEG AND 4' HIGH

CMU — CONCRETE MASONRY UNIT - BENJAMIN MOORE UNLESS NOTED OTHERWISE
1. GENERAL - HC-173 EDGECOMB GRAY
2. WAINSCOT - HC - 163 DUXBURY GRAY
3. ACCENT WALL - HC-105 ROCKPORT GRAY

CT — CERAMIC TILE - 1/8" GROUT JOINT UNLESS NOTED OTHERWISE
1. FLOOR - CROSSVILLE ALTERED STATE STEEL GLAZE 12 X 24 UNPOLISHED
2. BASE - CROSSVILLE ALTERED STATE STEEL GLAZE 6 X 24 UNPOLISHED
3. GENERAL WALL - CROSSVILLE FEEL IVORY 12 X 24
4. ACCENT WALL - CROSSVILLE ALTERED STATE COPPER CORE 12 X 24 UNPOLISHED
5. SPLASH - MERCURY MOSAICS #65W AMBER 3 X 8
6. JANITOR ROOM - DALTILE WALL CLASSIC BISCUIT #K175K 3 X 6
7. ACCENT TILE - DALTILE ARTIGIANO #AR97 MILAN ARENA 3 X 12

EM — ENTRY MAT CARPET TILE - MANNINGTON
TRAVERSE #8509 BROWN THRASHER

ES — EXPOSED STRUCTURE

GR — GROUT - LATICRETE UNLESS NOTED OTHERWISE
1. CT1, CT2 AND CT4 - #60 DUSTY GRAY
2. CT3, CT6 AND CT7 - # 90 LIGHT PEWTER
3. CT5 - #45 RAVEN

M — MIRROR

MB — MARKER BOARD
DEKO MAGNETIC MARKER BOARDS -
MOONSTONE 5'W X 4'H

P — GYPSUM WALL BOARD, TAPE, BED, TEXTURE & PAINT - BENJAMIN MOORE UNLESS NOTED OTHERWISE
1. HC-173 EDGECOMB GRAY
2. HC-105 ROCKPORT GRAY
3. AC-2 BERKSHIRE BEIGE
4. HC-163 DUXBURY GRAY
5. HC-85 FAIRVIEW TAUPE
6. HC-164 PURITAN GRAY

PM — PAINTED METAL - BENJAMIN MOORE UNLESS NOTED OTHERWISE
1. GENERAL - HC-85 FAIRVIEW TAUPE

QT — QUARRY TILE -
1. (WINDOW SILLS @ APPARATUS BAYS ?)

RB — RUBBER BASE - JOHNSONITE MILLWORK REVEAL
1. STRAIGHT - #283 TOAST
2. WITH TOE TRIM - #283 TOAST

RT — FLOATING RESILIENT FLOOR TILE - MOHAWK SECOYA #352 SIERRA 9 X 59 PLANK

SH — WINDOW SHADE - MECHO SHADE
1. GENERAL - EUROTWILL REVERSIBLE WEAVE 600 SERIES (3% OPEN) #6011 GRAPHITE
2. DORM ROOM - EQUINOX BLACKOUT 0100 SERIEC (OPAQUE) #0117 GRAPHITE

SM — SOLID SURFACE MATERIAL - DUPONT ZODIAQ GRAPHITE

SP — SPORTS FLOORING - ECORE - ECONIGHTS - STARDUST #635A INTERLOCKING TILES

SS — STAINLESS STEEL

WS — WOOD / WOOD STAIN
WOOD - CHERRY
CUT - PLANE SAWN
FINISH - STAINED TO MATCH
LAMIN-ART #3050-FG OILED TEAK

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

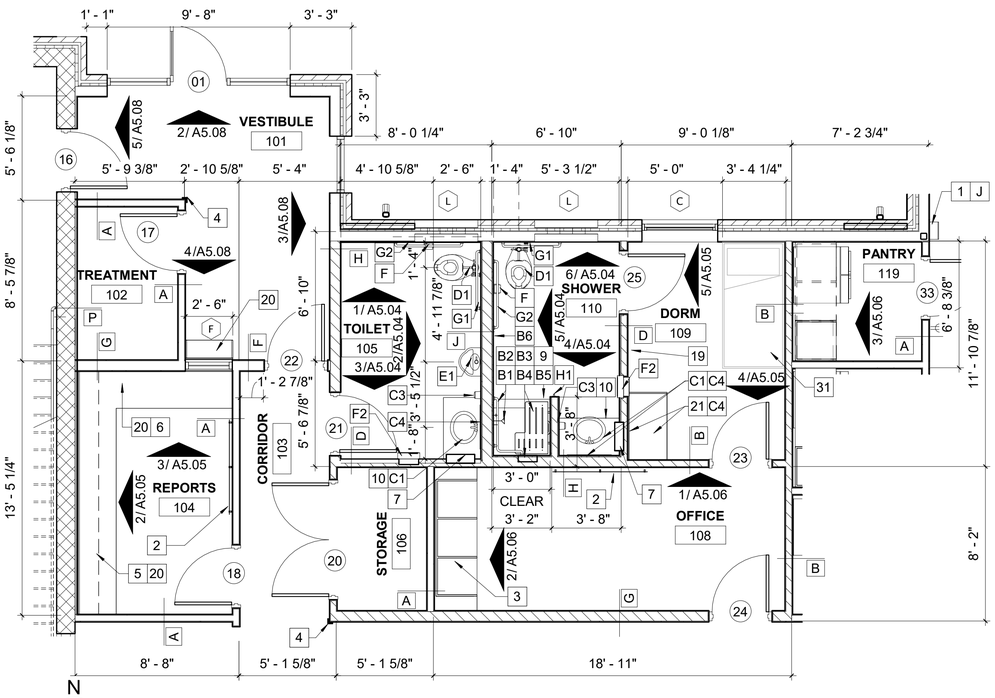
MANSFIELD FIRE STATION NO. 5

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Mansfield, Texas 76063

FINISH SCHEDULE

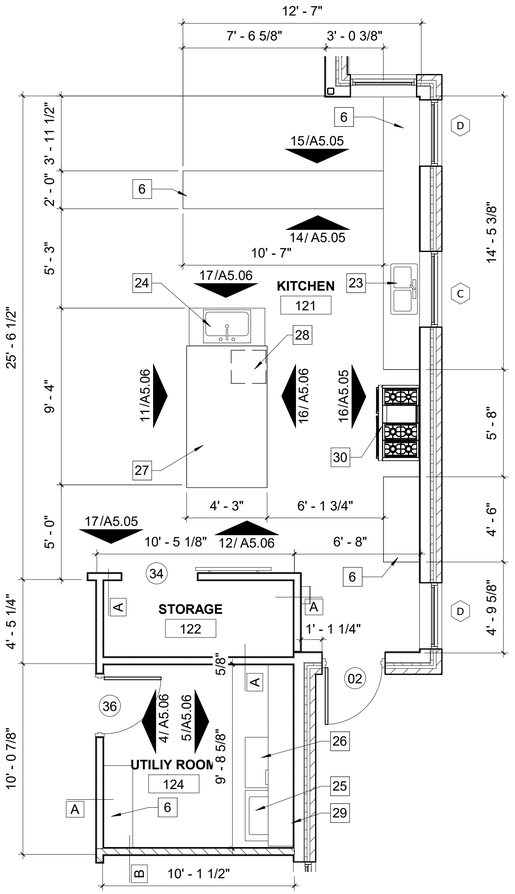
SHEET SIZE: 22 x 34
JOB NO: 2016.166
DATE: 11/07/2019
SHEET: A5.01

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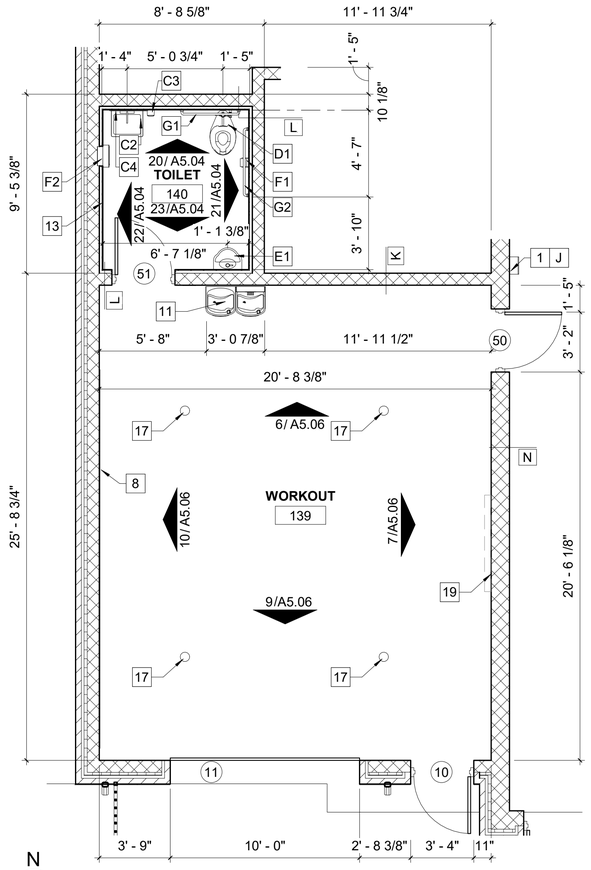
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1 A5.02 REPORTS, PUBLIC TOILET & OFFICER DORM & SHOWER & PANTRIES
1/4" = 1'-0"



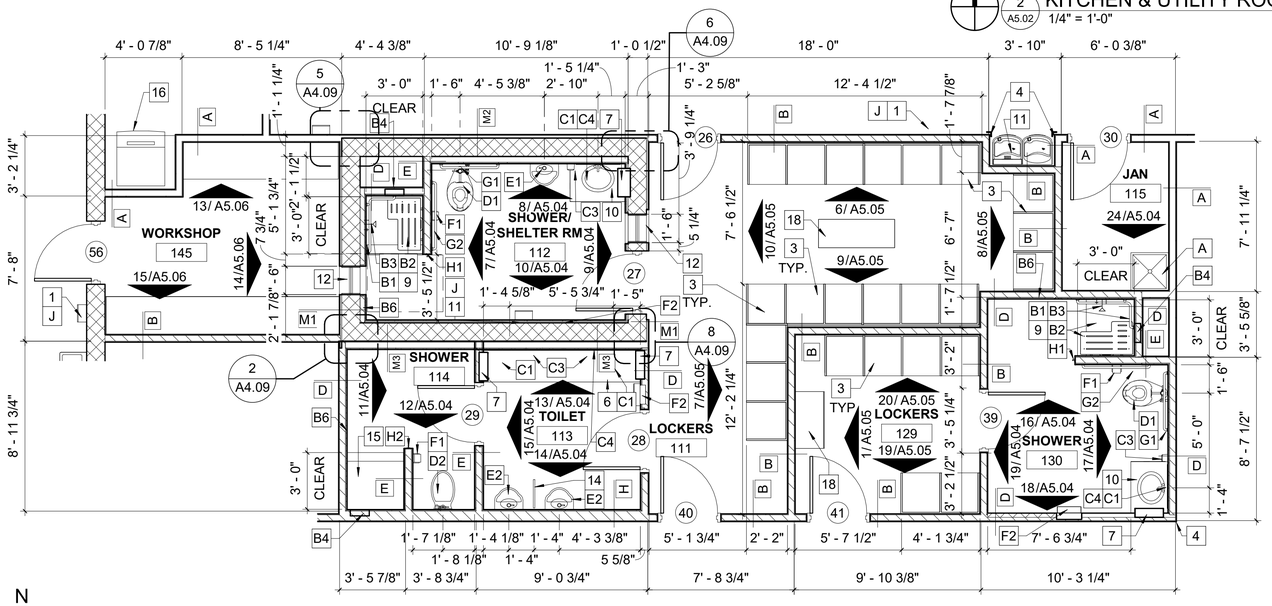
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2 A5.02 KITCHEN & UTILITY ROOM
1/4" = 1'-0"



N

3 A5.02 WORKOUT ROOM & TOILET
1/4" = 1'-0"



N

4 A5.02 SHOWERS & LOCKERS
1/4" = 1'-0"

GENERAL NOTES

A. REFER TO SHEET G0.01 FOR SYMBOLS LEGEND.
B. REFER TO SHEET A5.01 FOR FINISH SCHEDULE.
C. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC.
D. REFER TO SHEET A1.04 FOR PARTITION TYPES.
E. ALL WOOD BLOCKING AND NAILERS SHALL BE FIRE RETARDANT TREATED.
F. REFER TO SHEET A5.02 FOR TOILET ACCESSORIES AND FIXTURE LEGEND
G. DIMENSIONS FOR PARTITION WALLS ARE TAKEN FROM FACE OF STUD TO FACE OF STUD, UNLESS NOTED OTHERWISE
H. DIMENSIONS FOR PLUMBING FIXTURES ARE TAKEN FROM CENTERLINE OF FIXTURE TO FINISH OF ADJACENT WALL, UNLESS NOTED OTHERWISE.
I. " " INDICATES STUD WALLS W/ SOUND ATTENUATION BATTS
J. GC TO PROVIDE BLOCKING FOR ALL OWNER PROVIDED ACCESSORIES (INCLUDING BUT NOT LIMITED TO SOAP DISPENSERS AND TV/MONITORS)

NOTES BY SYMBOL

" X "

1. FIRE EXTINGUISHER CABINET
2. DRY ERASE BOARD 'MB'
3. STAINED WOOD 'WS' WARDROBE UNIT WITH COMBINATION LOCKS.
4. CORNER GUARD.
5. STAINED WOOD 'WS' UPPER CABINETS.
6. STAINED WOOD 'WS' CABINET WITH SOLID SURFACE MATERIAL 'SM' COUNTERTOP.
7. SHOWER CUBBIE, REFER 3 OR 4/A5.09
8. WALL MOUNT MIRRORS, ALONG ENTIRE WALL
9. TAS SHOWER, REFER 3/A5.03 AND PLUMBING
10. STAINED WOOD 'WS' REMOVABLE PANEL WITH SOLID SURFACE 'SM' END PANEL
11. ELECTRIC WATER COOLER, HI/LOW UNIT WITH CANE DETECTION
12. PREFINISHED METAL LOUVER, PAINTED TO MATCH THE ADJACENT WALL, REFER MECHANICAL
13. TILE FINISH ON 5/8" GYPSUM BOARD (TO 6" ABOVE FINISH CEILING) ON 7/8" METAL HAT CHANNEL ON EXTERIOR CMU WALL
14. URINAL SCREEN 'SM'
15. NON-TAS SHOWER REFER 4/A5.03 AND PLUMBING
16. ICE MACHINE, REFER PLUMBING
17. 4 EQUAL SPACE FLOOR OUTLETS, REFER ELECTRICAL
18. LOCKER BENCH, REFER 6/A5.09
19. PROVIDE BLOCKING FOR WALL MOUNTED MONITOR
20. CANTILEVER SOLID SURFACE MATERIAL 'SM' COUNTER WITH TRANSACTION TRAY
21. STAINED WOOD 'WS' CABINET, DRAWERS ONLY WITH COMBINATION LOCKS.
22. COOK TOP RANGE AND VENT HOOD WITH ANSUL, REFER MECHANICAL
23. DOUBLE SINK WITH DISPOSER, CENTER SINK ON WINDOW, REF. PLUMBING DRAWINGS.
24. ISLAND MILLWORK WITH STAINLESS STEEL TOP AND INTEGRAL DEEP SINGLE SINK WITH DISPOSER.
25. CLOTHES WASHING MACHINE.
26. CLOTHES DRYER.
27. STAINED WOOD 'WS' ISLAND WITH STAINLESS STEEL 'SS' COUNTERTOP
28. DISHWASHER
29. STAINED WOOD 'WS' CUBBIES
30. COOKTOP RANGE AND VENT HOOD WITH ANSUL, REFER MECHANICAL.
31. BED AND FRAME BY OWNER.

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KIM A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ENLARGED PLANS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.02

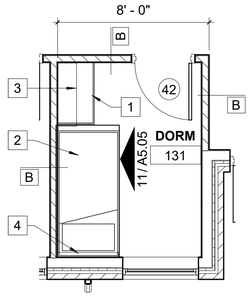
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GENERAL NOTES

A. REFER TO SHEET G0.01 FOR SYMBOLS LEGEND.
B. REFER TO SHEET A5.01 FOR FINISH SCHEDULE.
C. ALL NOTES BY SYMBOL ARE SHEET SPECIFIC.
D. REFER TO SHEET A1.06 FOR PARTITION TYPES.
E. ALL WOOD BLOCKING AND NAILERS SHALL BE FIRE RETARDANT TREATED.
F. REFER TO SHEET A5.01 FOR TOILET ACCESSORIES AND FIXTURE LEGEND
G. DIMENSIONS FOR PARTITION WALLS ARE TAKEN FROM FACE OF STUD TO FACE OF STUD, UNLESS NOTED OTHERWISE
H. DIMENSIONS FOR PLUMBING FIXTURES ARE TAKEN FROM CENTERLINE OF FIXTURE TO FINISH OF ADJACENT WALL, UNLESS NOTED OTHERWISE.
I. "▭▭▭" INDICATES STUD WALLS W/ SOUND ATTENUATION BATTS

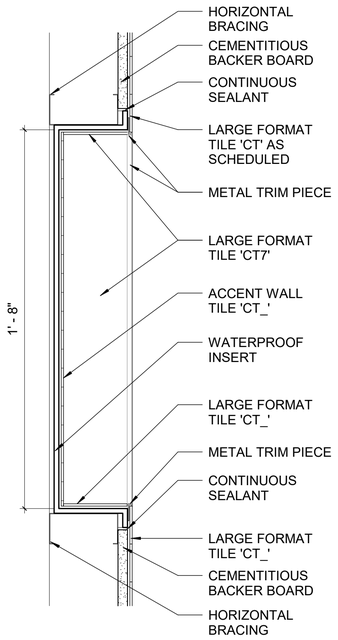
NOTES BY SYMBOL

1. STAINED WOOD 'WS' DESK UNIT WITH 'SM' TOP AND SIDE.
2. STAINED WOOD 'WS' BED PLATFORM UNIT WITH 3 DRAWERS WITH COMBINATION LOCKS.
3. 3' LONG STAINED WOOD 'WS' FLOATING SHELF, REFER 12/A5.10
4. 3/4" STAINED WOOD SHELF 'WS' WITH 1/8" REVEAL, REFER 13/A5.10

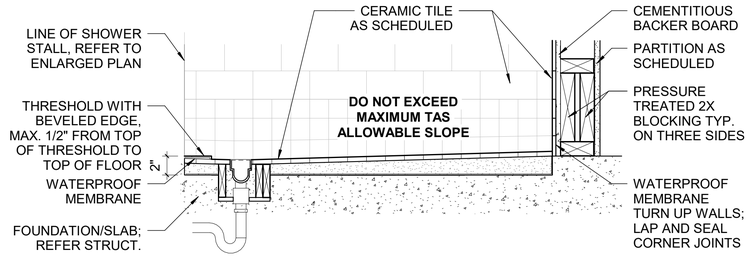


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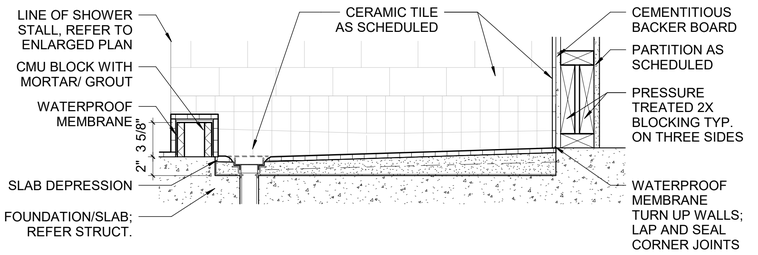
1 A5.03 TYPICAL DORM ROOM
1/4" = 1'-0"



2 A5.03 SHOWER SHELF
3" = 1'-0"

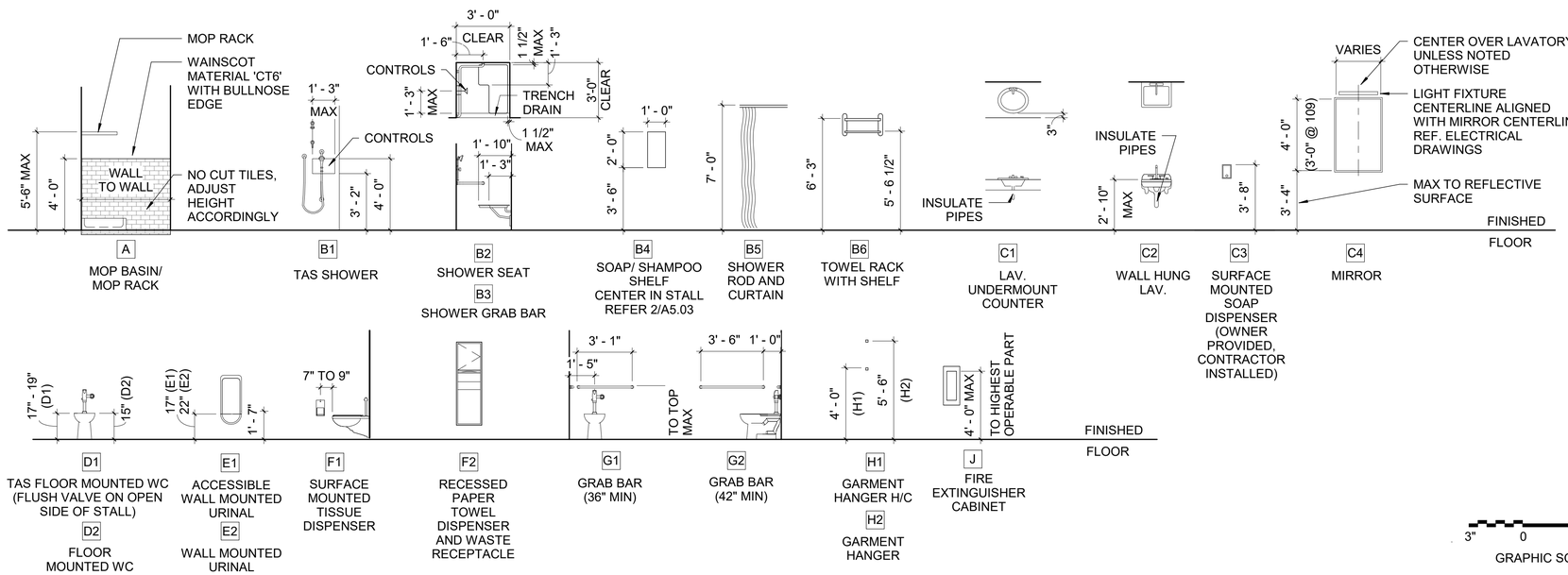


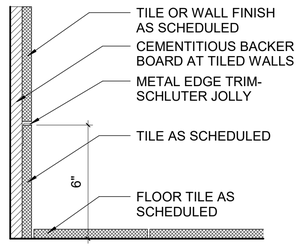
3 A5.03 ACCESSIBLE SHOWER
1 1/2" = 1'-0"



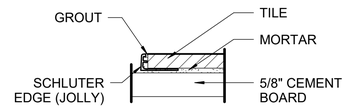
4 A5.03 NON ACCESSIBLE SHOWER
1 1/2" = 1'-0"

TOILET ACCESSORIES AND FIXTURE LEGEND





5 A5.03 TILE BASE EDGE DETAIL
3" = 1'-0"



6 A5.03 TILE TRANSITION EDGE DETAIL
6" = 1'-0"

3" 0 3" 6" 1'
GRAPHIC SCALE: 3" = 1'-0"

2' 0 2' 4' 8'
GRAPHIC SCALE: 1/4" = 1'-0"

1-1/2" 0 1-1/2" 3" 6"
GRAPHIC SCALE: 6" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

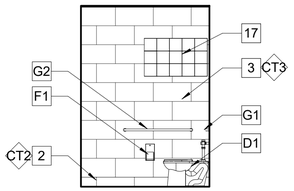
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

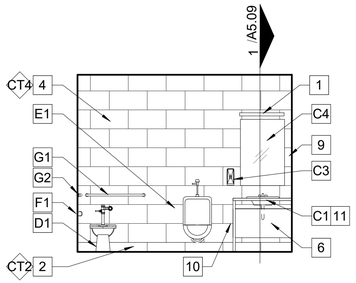
ENLARGED PLANS AND FIXTURE SCHEDULE

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.03

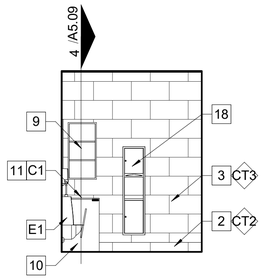
© 2016 Komatsu Architecture, Inc.



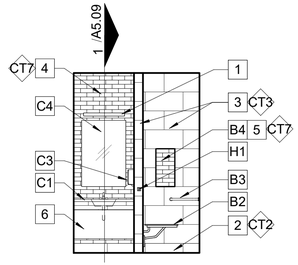
1 A5.04 TOILET 105 NORTH ELEV
1/4" = 1'-0"



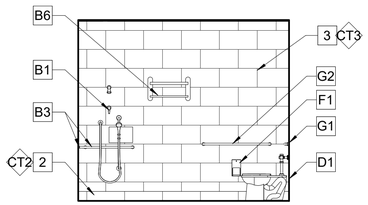
2 A5.04 TOILET 105 EAST ELEV
1/4" = 1'-0"



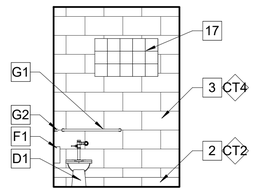
3 A5.04 TOILET 105 SOUTH ELEV
1/4" = 1'-0"



4 A5.04 SHOWER 110 SOUTH ELEV
1/4" = 1'-0"



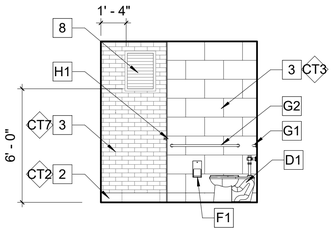
5 A5.04 SHOWER 110 WEST ELEV
1/4" = 1'-0"



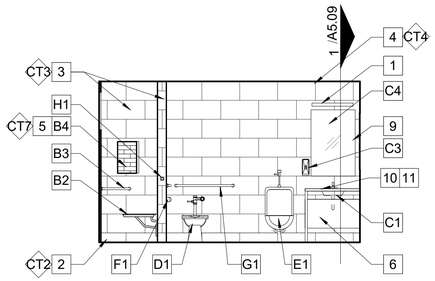
6 A5.04 SHOWER 110 NORTH ELEV
1/4" = 1'-0"

NOTES BY SYMBOL

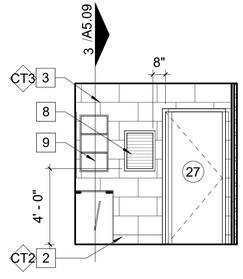
1. LIGHT FIXTURE, REFER ELECTRICAL
2. TILE BASE
3. GENERAL WALL TILE
4. ACCENT WALL TILE
5. SOAP/SHAMPOO SHELF 'CT7', REFER 7/A5.03
6. STAINED WOOD 'WS' REMOVABLE PANEL WITH SOLID SURFACE 'SM' END PANEL W/ MITERED CORNER
7. TAS COMPLIANT BENCH
8. PREFINISHED METAL LOUVER, PAINTED TO MATCH THE ADJACENT WALL; REFER MECHANICAL
9. STAINED WOOD 'WS' WALL MOUNTED SHELVING
10. SOLID SURFACE END PANEL WITH MITERED CONNECTION
11. SOLID SURFACE COUNTERTOP 'SM'
12. URINAL SCREEN 'SM'
13. WAINSCOT MATERIAL 'CT' WITH BULLNOSE EDGE
14. FIRE EXTINGUISHER CABINET
15. PAINTED GYPSUM BOARD WALL, REFER A5.01 FOR FINISH COLOR
16. STAINED WOOD 'WS' CABINET WITH SOLID SURFACE MATERIAL 'SM' COUNTERTOP
17. GLASS BLOCK WINDOW REFER A6.03
18. PAPER TOWEL DISPENSER
19. STAINED WOOD 'WS' CABINET, DRAWERS ONLY



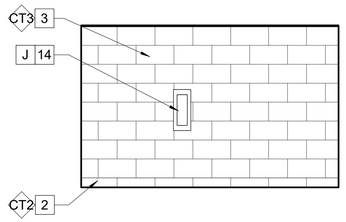
7 A5.04 SAFE ROOM 112 WEST ELEV
1/4" = 1'-0"



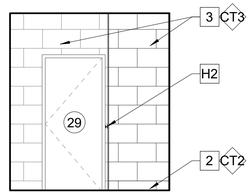
8 A5.04 SAFE ROOM 112 NORTH ELEV
1/4" = 1'-0"



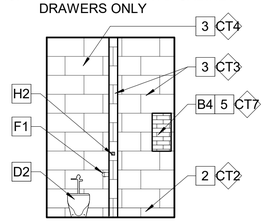
9 A5.04 SAFE ROOM 112 EAST ELEV
1/4" = 1'-0"



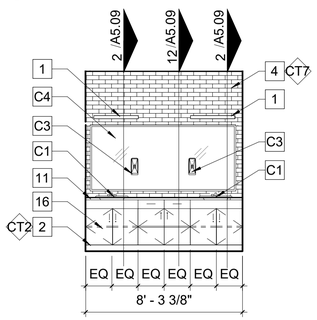
10 A5.04 SAFE ROOM 112 SOUTH ELEV
1/4" = 1'-0"



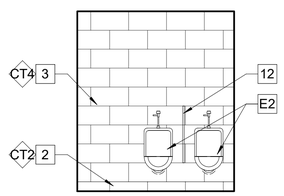
11 A5.04 SHOWER 114 EAST ELEV
1/4" = 1'-0"



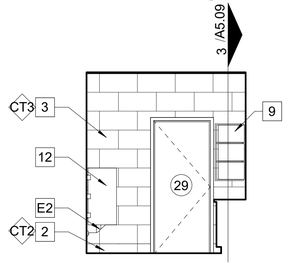
12 A5.04 SHOWER 114 SOUTH ELEV
1/4" = 1'-0"



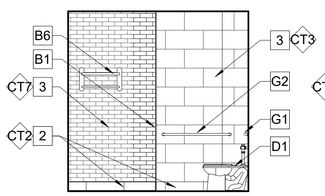
13 A5.04 TOILET 113 NORTH ELEV
1/4" = 1'-0"



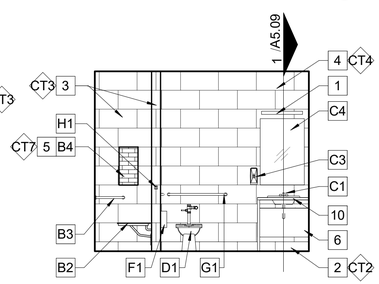
14 A5.04 TOILET 113 SOUTH ELEV
1/4" = 1'-0"



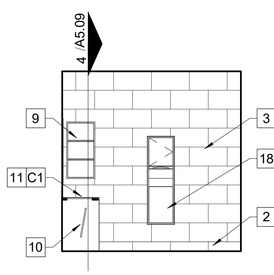
15 A5.04 TOILET 113 WEST ELEV
1/4" = 1'-0"



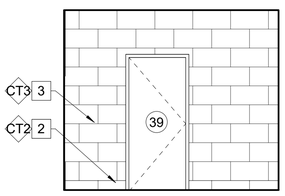
16 A5.04 SHOWER 130 NORTH ELEV
1/4" = 1'-0"



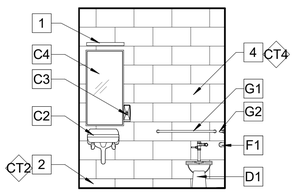
17 A5.04 SHOWER 130 EAST ELEV
1/4" = 1'-0"



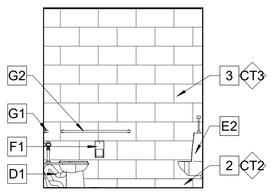
18 A5.04 SHOWER 130 SOUTH ELEV
1/4" = 1'-0"



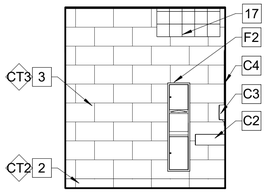
19 A5.04 SHOWER 130 WEST ELEV
1/4" = 1'-0"



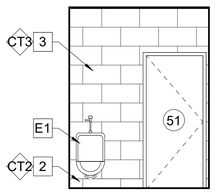
20 A5.04 TOILET 140 NORTH ELEV
1/4" = 1'-0"



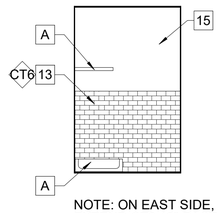
21 A5.04 TOILET 140 EAST ELEV
1/4" = 1'-0"



22 A5.04 TOILET 140 WEST ELEV
1/4" = 1'-0"



23 A5.04 TOILET 140 SOUTH ELEV
1/4" = 1'-0"



NOTE: ON EAST SIDE, EXTEND CT6 12" PAST MOP SINK.

24 A5.04 JANITOR 115 SOUTH ELEV
1/4" = 1'-0"

2' 0 2' 4' 8'
GRAPHIC SCALE: 1/4" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT JANE A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

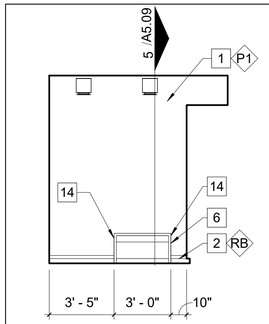
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

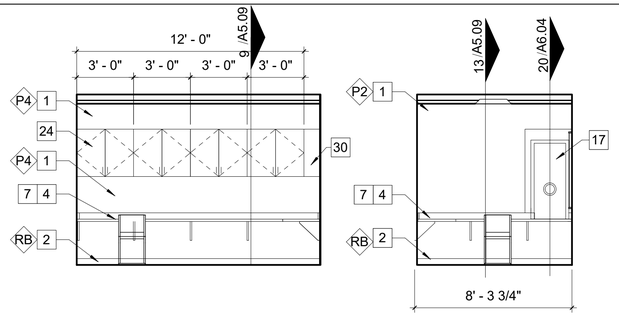
INTERIOR ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.04

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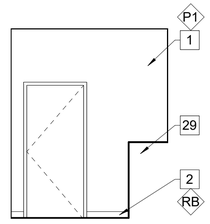


1 A5.05 LCKRS 129 W ELEV
1/4" = 1'-0"

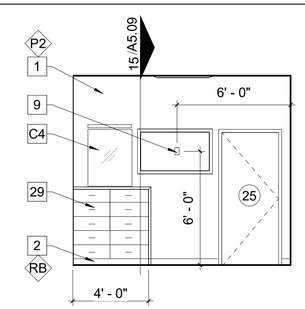


2 A5.05 REPORTS 104 WEST ELEV
1/4" = 1'-0"

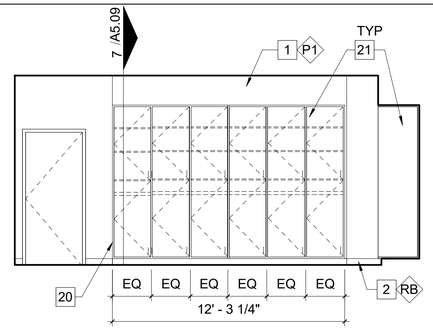
3 A5.05 REPORTS 104 NORTH ELEV
1/4" = 1'-0"



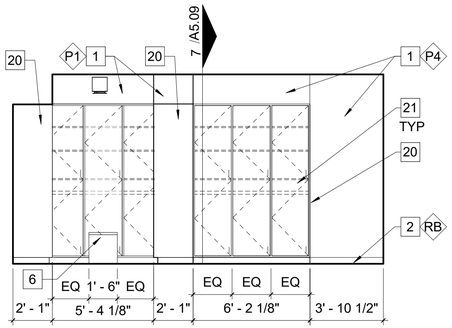
4 A5.05 DORM 109 SOUTH
1/4" = 1'-0"



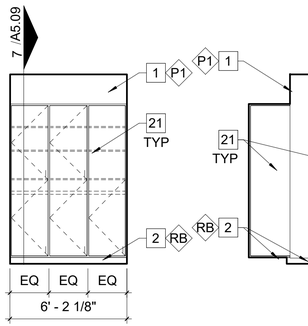
5 A5.05 DORM 109 WEST ELEV
1/4" = 1'-0"



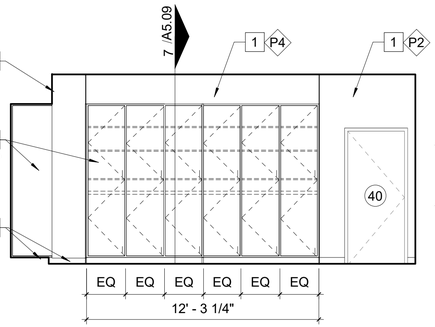
6 A5.05 LOCKERS 111 NORTH ELEV
1/4" = 1'-0"



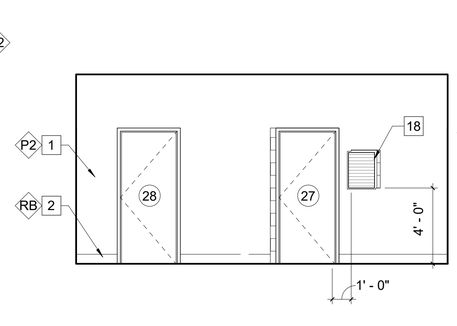
7 A5.05 LOCKERS 111 EAST ELEVATION
1/4" = 1'-0"



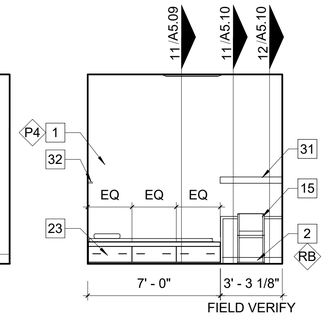
8 A5.05 LCKRS 111 PARTIAL E ELEV
1/4" = 1'-0"



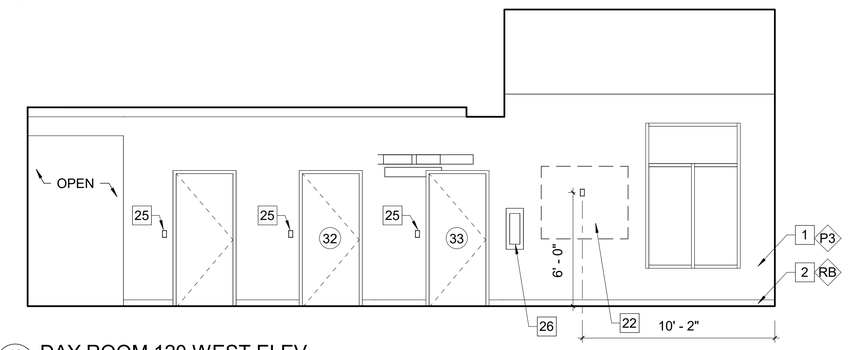
9 A5.05 LOCKERS 111 SOUTH ELEVATION
1/4" = 1'-0"



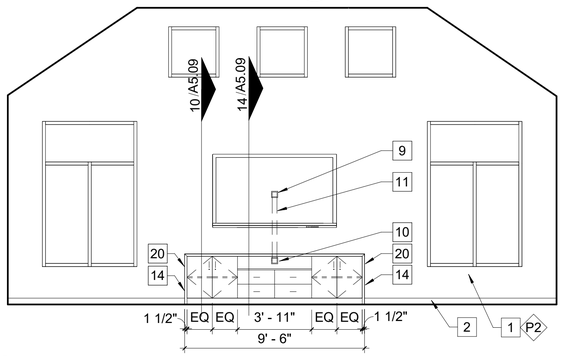
10 A5.05 LOCKERS 111 WEST ELEVATION
1/4" = 1'-0"



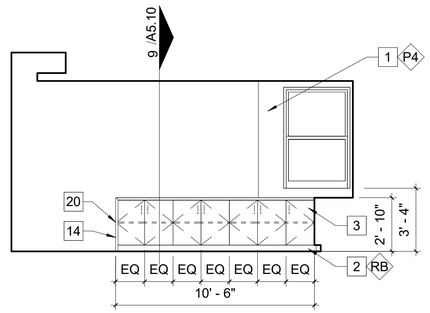
11 A5.05 TYP. DORM ELEV
1/4" = 1'-0"



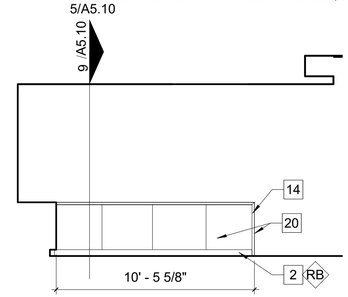
12 A5.05 DAY ROOM 120 WEST ELEV
1/4" = 1'-0"



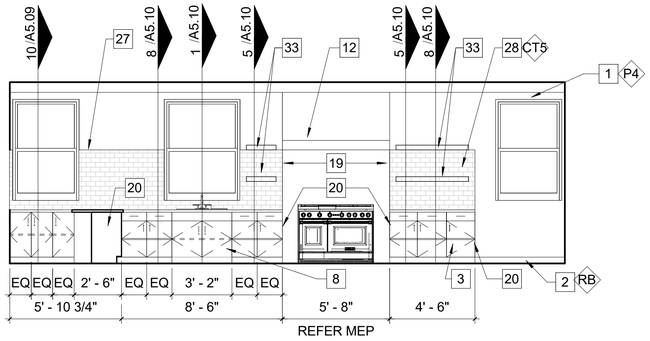
13 A5.05 DAY ROOM 120 NORTH ELEV
1/4" = 1'-0"



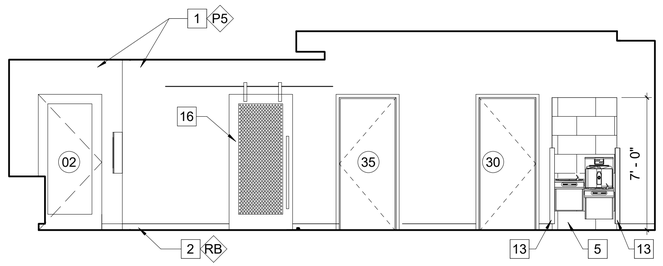
14 A5.05 KITCHEN 121 NORTH ELEV
1/4" = 1'-0"



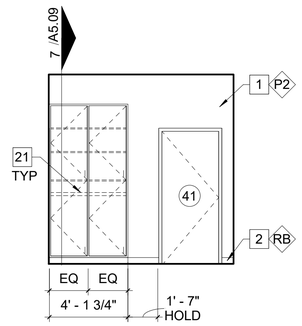
15 A5.05 KITCHEN 121 SOUTH ELEV
1/4" = 1'-0"



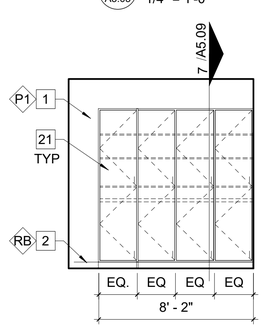
16 A5.05 KITCHEN 121 EAST ELEV
1/4" = 1'-0"



17 A5.05 KITCHEN 121 SOUTH ELEV
1/4" = 1'-0"



19 A5.05 LCKRS 129 S. ELEV
1/4" = 1'-0"



20 A5.05 LCKRS 129 N. ELEV
1/4" = 1'-0"

NOTES BY SYMBOL

X

1. PAINTED GYPSUM BOARD WALL; REFER A5.01 FOR FINISH COLOR
2. 4" RUBBER BASE 'RB'.
3. WOOD 'WS' CABINET WITH SOLID SURFACE MATERIAL 'SM' COUNTERTOP
4. SOLID SURFACE MATERIAL 'SM' COUNTER ON WALL MOUNTED METAL BRACKETS PAINTED TO MATCH WALL COLOR, W/ SOLID SURFACE MATERIAL 'SM' BACKSPLASH
5. 'CT4' FULL HEIGHT BACKSPLASH
6. LOCKER BENCH, REFER 6/A5.09
7. GROMMET AT CENTER OF EACH KNEE SPACE
8. SINK WITH WOOD 'WS' CABINET WITH SOLID SURFACE MATERIAL 'SM' COUNTERTOP
9. PROVIDE BLOCKING, POWER AND CABLING TO WALL MOUNTED MONITOR (CFCI)
10. STAINED WOOD 'WS' CUBBIES WITH POWER CONNECTION FOR TELEVISION COMPONENTS
11. CORD CONDUIT
12. EXHAUST HOOD VENT FURRING
13. CORNER GUARDS
14. 'SM' END PANEL WITH MITERED CORNER
15. STAINED WOOD 'WS' DESK UNIT WITH 'SM' COUNTERTOP WITH MITER CORNER
16. BARN DOOR WITH EXPOSED TRACK AND HARDWARE
17. TALK THRU & TRANSACTION COUNTER WINDOW
18. PREFINISHED METAL LOUVER, PAINTED TO MATCH ADJACENT WALL.
19. STAINLESS STEEL 'SS' BACKSPLASH, FULL HEIGHT OF WALL
20. FINISHED END
21. WOOD STAINED 'WS' WARDROBE UNIT WITH COMBINATION LOCKS
22. PROVIDE BLOCKING, POWER AND CABLING TO OWNER PROVIDED WALL MOUNTED MONITOR (OFCI)
23. STAINED WOOD 'WS' BED UNIT WITH DRAWERS UNDER PLATFORM.
24. STAINED WOOD 'WS' UPPER CABINETS
25. CARD READER, REFER ELECTRICAL
26. FIRE EXTINGUISHER CABINET
27. METAL TRIM PIECE, SCHLUTER, ALONG TOP OF CERAMIC TILE
28. CERAMIC TILE 'CT' BACKSPLASH
29. STAINED WOOD 'WS' CABINET, DRAWERS ONLY
30. FILLER PANEL
31. STAINED WOOD 'WS' FLOATING SHELF
32. 3/4" STAINED WOOD 'WS' WITH 1/8" REVEAL, REFER 13/A5.10
33. FLOATING STAINED WOOD 'WS' SHELF WITH TAPE LIGHT ON BOTTOM SIDE OF SHELF, REFER 5/A5.10

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/2019

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

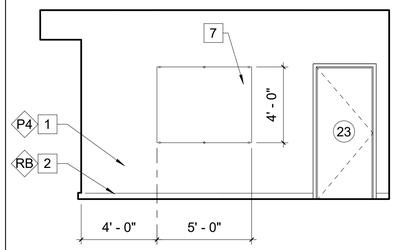
INTERIOR ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.05

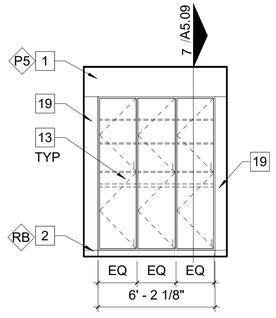
GRAPHIC SCALE: 1/4" = 1'-0"

2' 0 2' 4' 8'

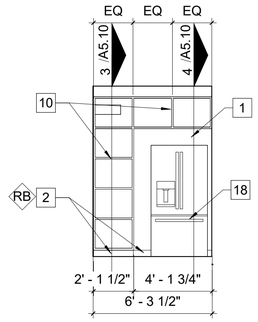
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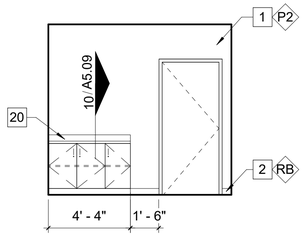
1 A5.06 OFFICE 108 NORTH ELEV
1/4" = 1'-0"



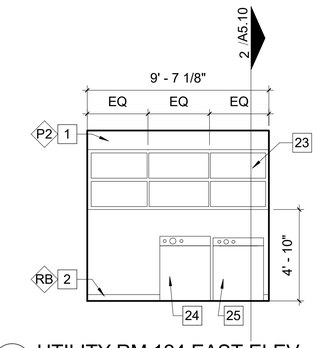
2 A5.06 OFFICE 108 WEST ELEV
1/4" = 1'-0"



3 A5.06 PANTRY 119 ELEV
1/4" = 1'-0"



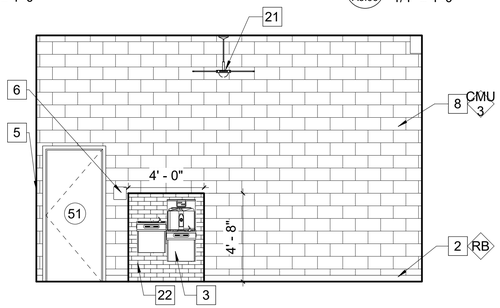
4 A5.06 UTILITY RM 124 W ELEV
1/4" = 1'-0"



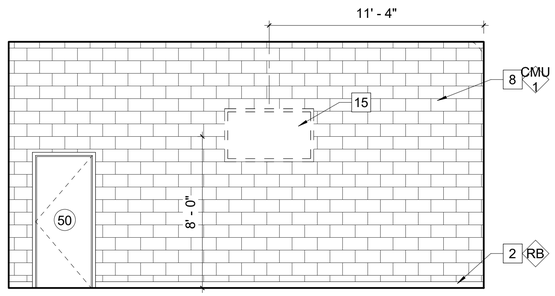
5 A5.06 UTILITY RM 124 EAST ELEV
1/4" = 1'-0"

NOTES BY SYMBOL "X"

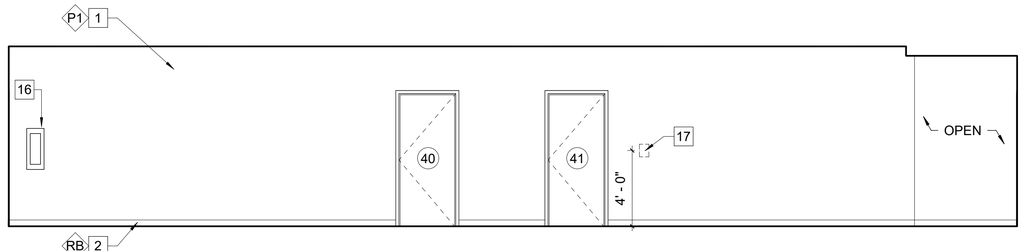
1. PAINTED GYPSUM BOARD WALL; REFER A5.01 FOR FINISH COLOR
2. 4" RUBBER BASE 'RB'.
3. TAS COMPLIANT ELECTRIC WATER COOLER WITH BOTTLE FILLER
4. WOOD 'WS' CABINET WITH SOLID SURFACE MATERIAL 'SM' COUNTERTOP
5. WALL MOUNT MIRROR
6. TAS COMPLIANT ROOM SIGNAGE, REFER A6.01
7. 5'X4' DRY ERASE BOARD 'MB'; REFER A5.01
8. PAINTED CMU WALL; REFER A5.01 FOR FINISH COLOR
9. OVERHEAD ALUMINUM DOOR WITH GLAZING
10. WOOD STAINED 'WS' PANTRY WITH SHELVING
11. PREFINISHED METAL LOUVER, PAINTED TO MATCH THE ADJACENT WALL; REFER MECHANICAL
12. FINISHED END
13. WOOD STAINED 'WS' WARDROBE UNIT
14. UNDERMOUNT SINK WITH ACCESSIBLE PANEL
15. PROVIDE BLOCKING, POWER AND CABLING TO WALL MOUNTED MONITOR (OFCI)
16. FIRE EXTINGUISHER CABINET
17. PROVIDE BLOCKING FOR OWNER PROVIDED PHONE
18. GC VERIFY CLEARANCE OF REFRIGERATOR
19. STAINED WOOD FILLER PANEL
20. 'SM' BACKSPLASH, TOP & END PANEL WITH MITERED CORNER, WITH STAINED WOOD 'WS' CABINET
21. CEILING FAN, REFER ELECTRICAL
22. 4' WIDE BY 4'-8" HEIGHT, 'CT7' SURROUND, BULLNOSE EDGE ALL SIDES, CENTER ON EWC
23. WOOD STAINED 'WS' CUBBIES
24. CLOTHES DRYER
25. CLOTHES WASHER



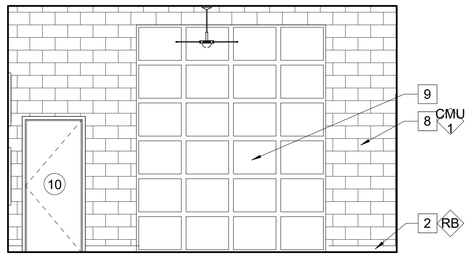
6 A5.06 WORKOUT 139 NORTH ELEV
1/4" = 1'-0"



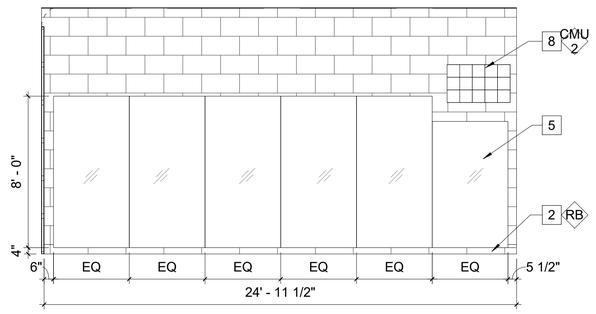
7 A5.06 WORKOUT 139 EAST ELEV
1/4" = 1'-0"



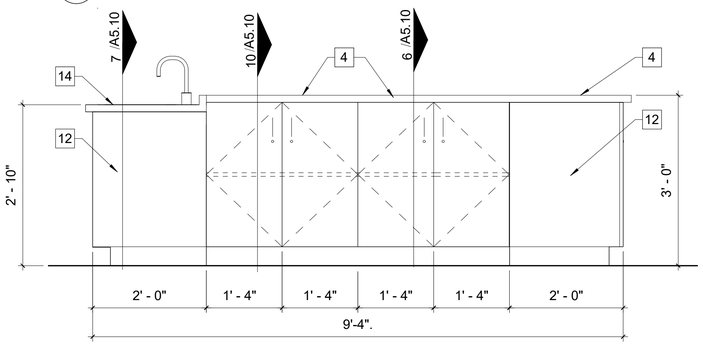
8 A5.06 CORRIDOR 128 EAST ELEVATION
1/4" = 1'-0"



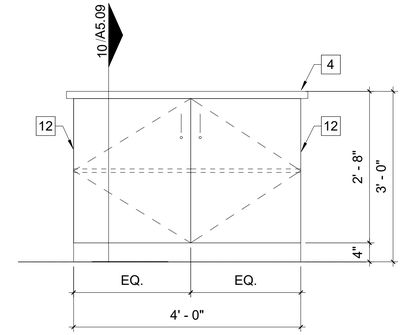
9 A5.06 WORKOUT 139 SOUTH ELEV
1/4" = 1'-0"



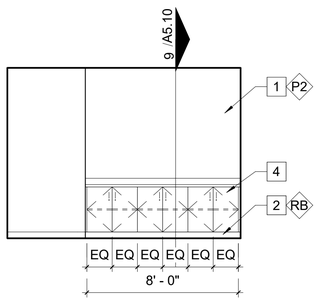
10 A5.06 WORKOUT 139 WEST ELEV
1/4" = 1'-0"



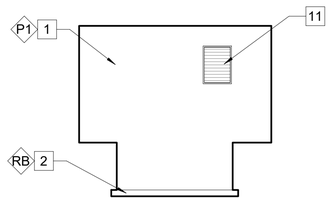
11 A5.06 KITCHEN ISLAND EAST ELEV.
3/4" = 1'-0"



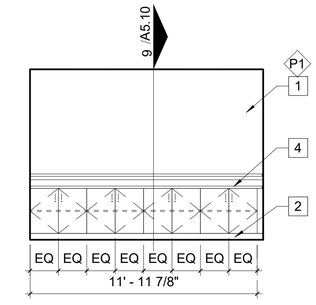
12 A5.06 KITCHEN ISLAND SOUTH ELEV.
3/4" = 1'-0"



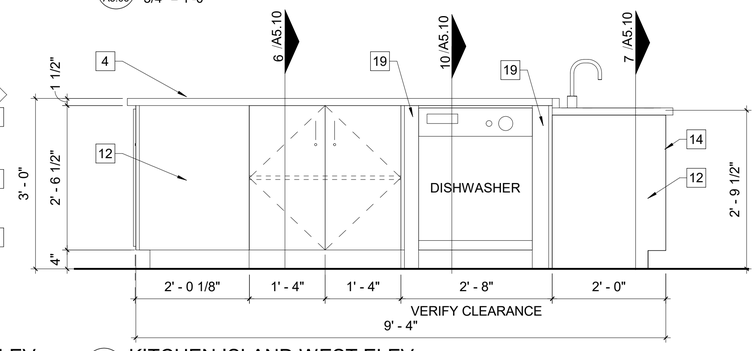
13 A5.06 WORKSHOP 145 NORTH ELEV
1/4" = 1'-0"



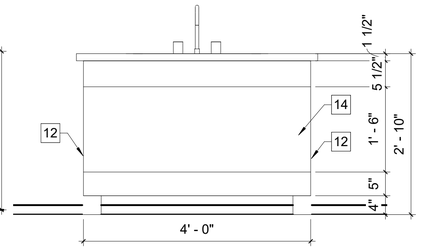
14 A5.06 WORKSHOP 145 EAST ELEV
1/4" = 1'-0"



15 A5.06 WORKSHOP 145 SOUTH ELEV
1/4" = 1'-0"



16 A5.06 KITCHEN ISLAND WEST ELEV.
3/4" = 1'-0"



17 A5.06 KITCHEN ISLAND NORTH ELEV
3/4" = 1'-0"

2' 0 2' 4' 8' GRAPHIC SCALE: 1/4" = 1'-0"

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

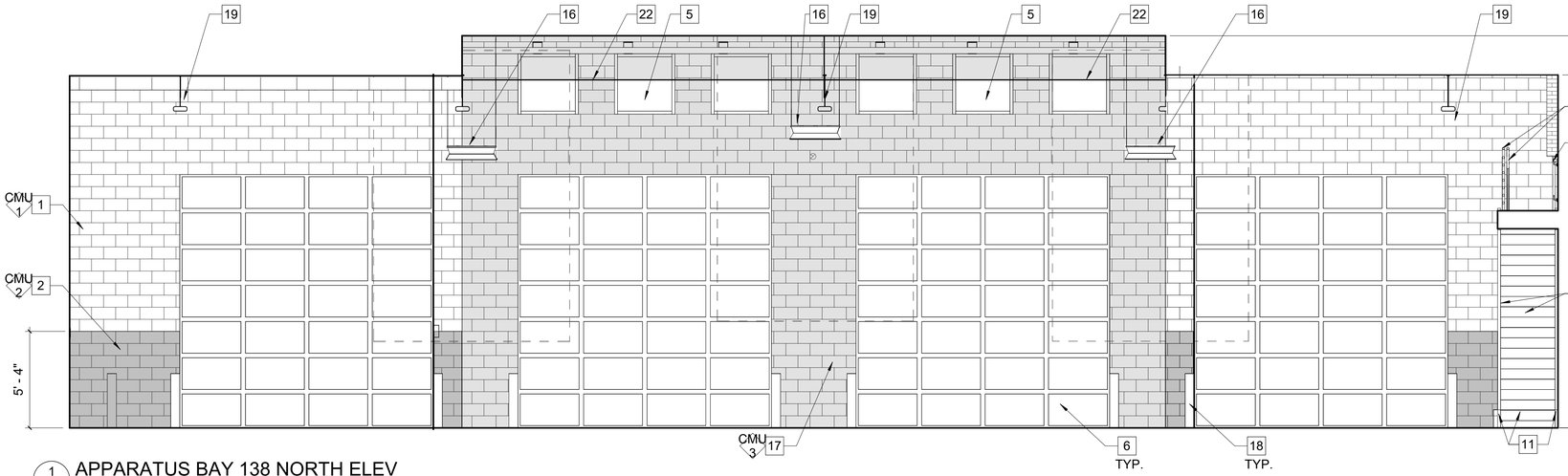
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

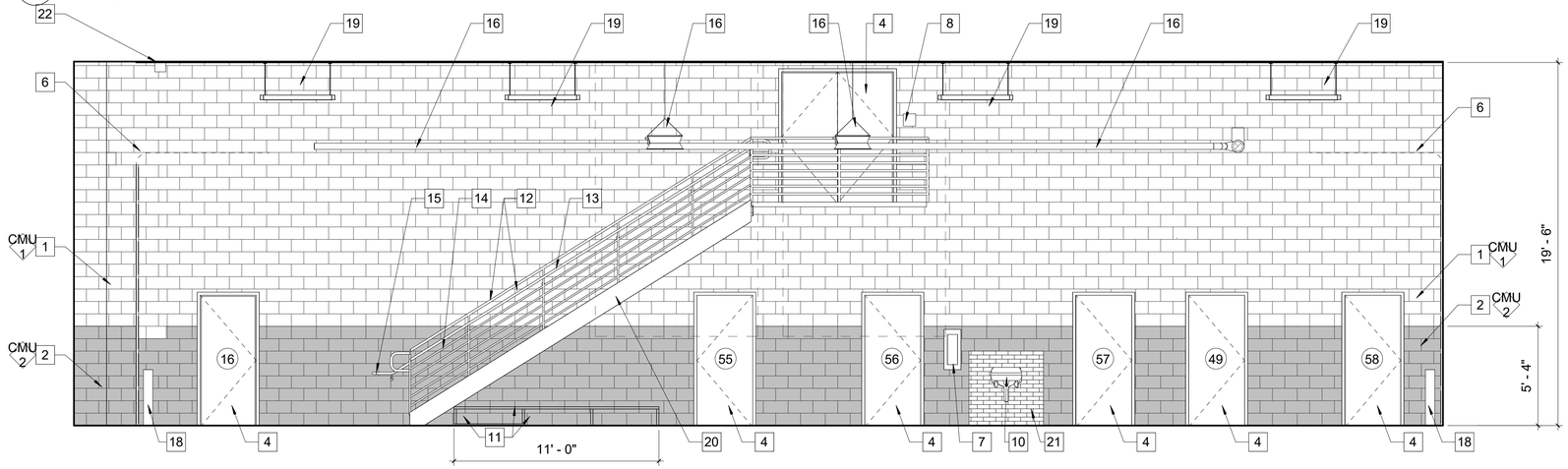
INTERIOR ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.06

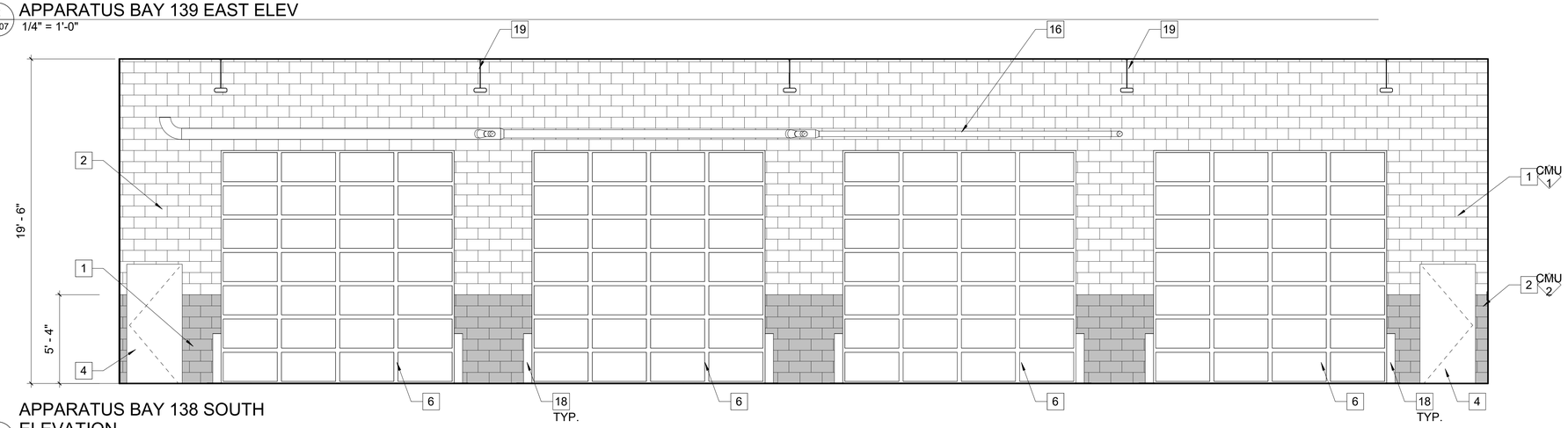
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1 A5.07 APPARATUS BAY 138 NORTH ELEV
1/4" = 1'-0"



2 A5.07 APPARATUS BAY 139 EAST ELEV
1/4" = 1'-0"



3 A5.07 APPARATUS BAY 138 SOUTH ELEVATION
1/4" = 1'-0"

NOTES BY NUMBER "X"

1. PAINTED CMU WALL - 5'-4" AFF TO TOP OF STRUCTURE
2. PAINTED CMU WALL - UP TO 5'-4" AFF
3. EXPOSED STRUCTURE - ES - PAINTED
4. PAINTED HOLLOW METAL DOOR & FRAME 'PM'
5. ALUMINUM WINDOW AS SCHEDULED
6. OVERHEAD ALUMINUM DOOR WITH GLAZING
7. FIRE EXTINGUISHER CABINET
8. TAS COMPLIANT ROOM SIGNAGE, REFER A6.01
9. LIGHTS, REFER A7.01 AND ELECTRICAL SHEETS
10. SERVICE SINK, REFER PLUMBING
11. 1 1/2" O.D. GALVANIZED STEEL PIPE RAIL (FOR CANE DETECTION), 12" HIGH, WITH EQUAL SPACED 1 1/2" O.D. SUPPORTS, ALIGN WITH STAIR STRINGER ABOVE,PAINT 'PM'.
12. 1 1/2" O.D. GALVANIZED STEEL PIPE HANDRAIL (36")/GUARDRAIL (42") WITH SUPPORTS EVERY 4'-0" MAX, REFER DETAILS 3,4,5,6/A4.07, PAINT 'PM'.
13. WHERE HANDRAILS ARE SUPPORTED BY GUARDRAILS, ALL HANDRAIL TERMINATIONS WILL BE TO A VERTICAL GUARDRAIL POST
14. 1/2" DIAMETER STEEL ROD BALUSTERS SPACED 4" O.C. MAX, PAINT 'PM'.
15. 1 1/2" O.D. GALVANIZED STEEL PIPE HANDRAIL (36"), PAINT 'PM'.
16. RADIANT HEATER, BOTTOM AT 15'-0" AFF, REFER A7.01 AND MECHANICAL
17. PAINTED CMU WALL
18. INTERIOR BOLLARD, PAINT 'PM', REFER 4/A0.03
19. SUSPENDED LIGHT FIXTURE, REFER ELECTRICAL
20. METAL STAIR RISERS AND STRINGER, PAINT 'PM'
21. 4'-0" X 4'-0" 'CT6' SURROUND BEHIND SERVICE SINK WITH BULLNOSE EDGES, CENTER ON SERVICE SINK.
22. PAINTED GYPSUM BOARD FURRDOWN TO MATCH CMU 3, BOTTOM OF FURRDOWN AT 19'-3" AFF

GRAPHIC SCALE: 1/4" = 1'-0"
2' 0 2' 4' 8'

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS
ISSUE DATE: 11/07/19

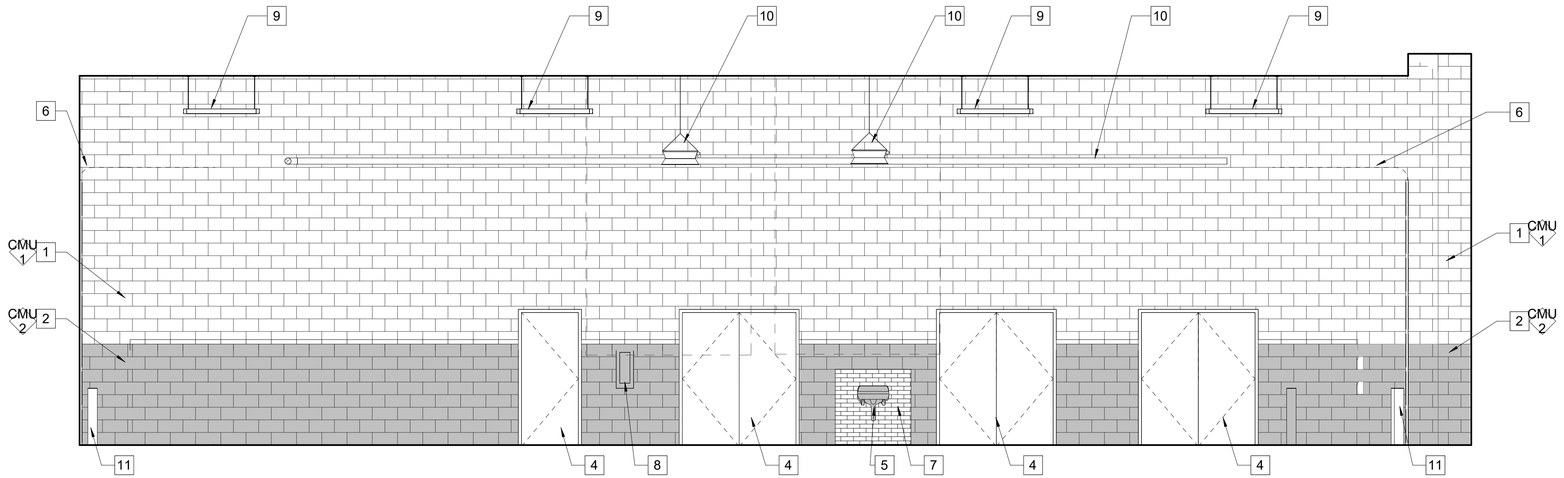
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

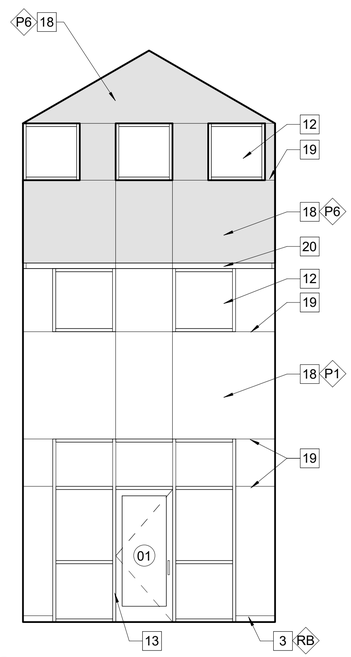
INTERIOR ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.07

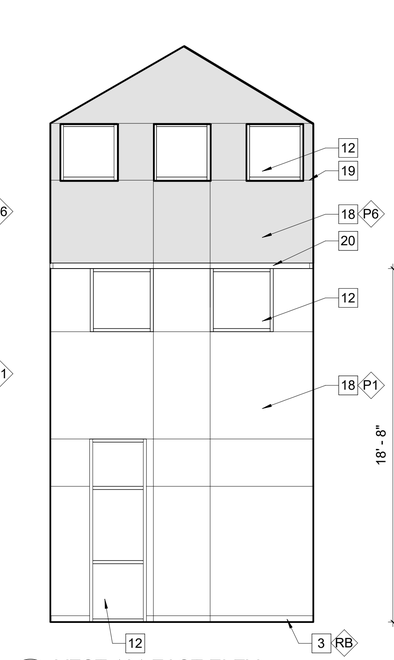
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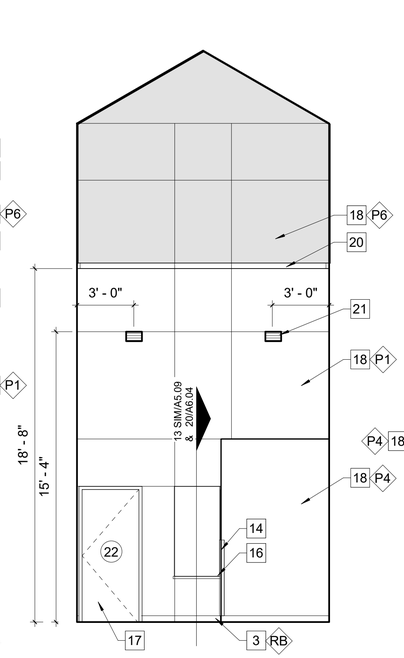
1 A5.08 APPARATUS BAY 138 WEST ELEVATION
1/4" = 1'-0"



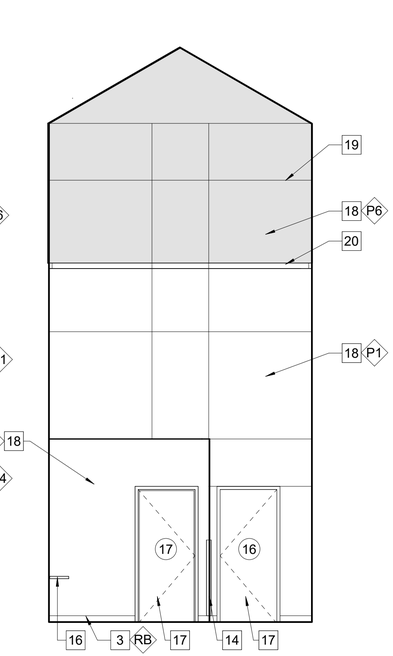
2 A5.08 VEST 101 NORTH ELEV
1/4" = 1'-0"



3 A5.08 VEST 101 EAST ELEV
1/4" = 1'-0"



4 A5.08 VEST 101 S ELEV
1/4" = 1'-0"



5 A5.08 VEST 101 WEST ELEV
1/4" = 1'-0"

NOTES BY NUMBER " X "

1. PAINTED CMU WALL - 5'-4" AFF TO TOP OF STRUCTURE
2. PAINTED CMU WALL - UP TO 5'-4" AFF
3. 4" RUBBER BASE 'RB'
4. PAINTED HM DOOR & FRAME
5. SERVICE SINK, REFER PLUMBING
6. OVERHEAD ALUMINUM DOOR WITH GLAZING
7. 4'-0" X 4'-0" 'CT6' SURROUND BEHIND SERVICE SINK WITH BULLNOSE EDGES, CENTER ON SERVICE SINK.
8. FIRE EXTINGUISHER CABINET
9. SUSPENDED LIGHT FIXTURES, REFER A7.01 AND ELECTRICAL
10. RADIANT HEATER, BOTTOM OF HEATER AT 15'-0" AFF, REFER A7.01 AND MECHANICAL
11. INTERIOR BOLLARD, REFER 4/A0.03
12. ALUMINUM WINDOW AS SCHEDULED
13. ALUMINUM STOREFRONT AS SCHEDULED
14. CORNER GUARD 'CG'
15. TALK THRU & TRANSACTION COUNTER WINDOW
16. SOLID SURFACE MATERIAL 'SM' CANTILEVER COUNTER WITH TRANSACTION TRAY.
17. HM FRAME AND WOOD DOOR AS SCHEDULED
18. PAINTED GYPSUM BOARD WALL; REFER A5.01 FOR FINISH COLOR
19. CONTROL JOINT
20. WALL MOUNTED FIXTURE, REFER A7.01 AND ELECTRICAL
21. WALL MOUNTED MECHANICAL DIFFUSER

2' 0 2' 4' 8'
GRAPHIC SCALE: 1/4" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

KARL K. KOMATSU REGISTERED ARCHITECT 6843 STATE OF TEXAS
ISSUE DATE: 11/07/19

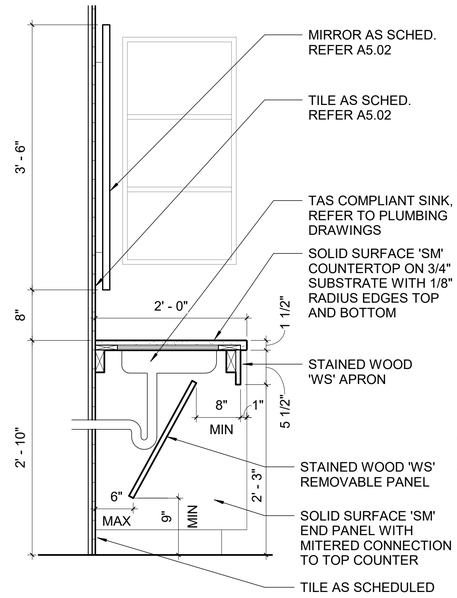
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

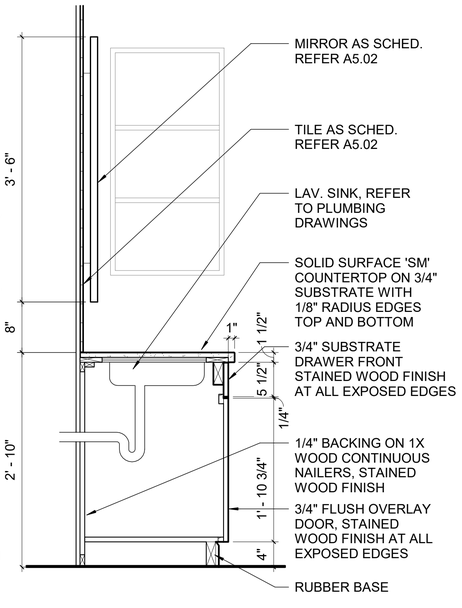
INTERIOR ELEVATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.08

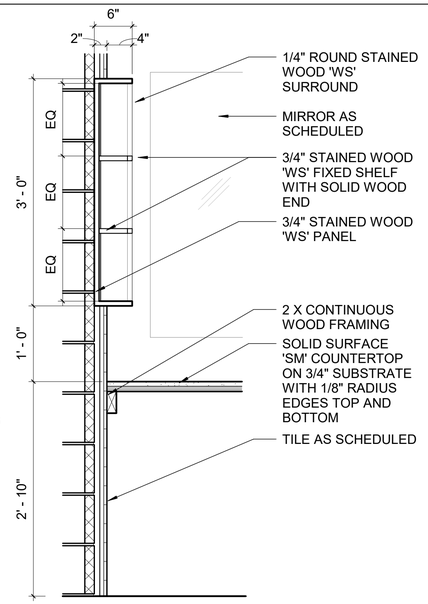
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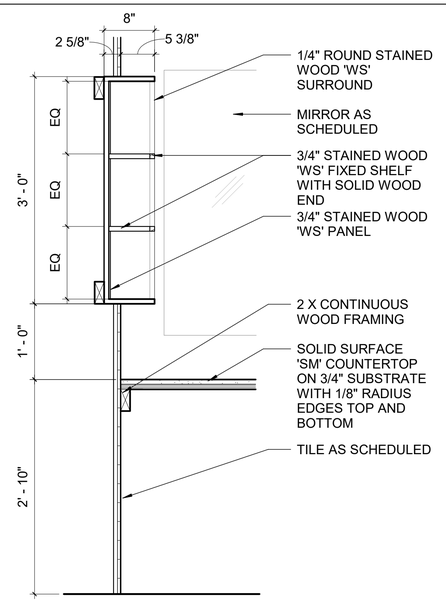
1 ACCESSIBLE SAFE ROOM SINK
A5.09 1" = 1'-0"



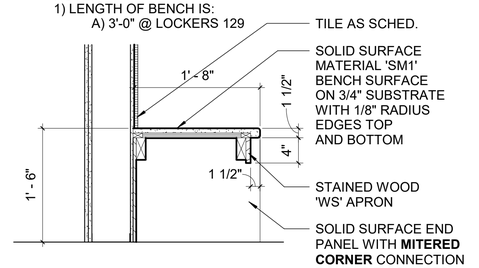
2 NON ACCESSIBLE BATHROOM SINK
A5.09 1" = 1'-0"



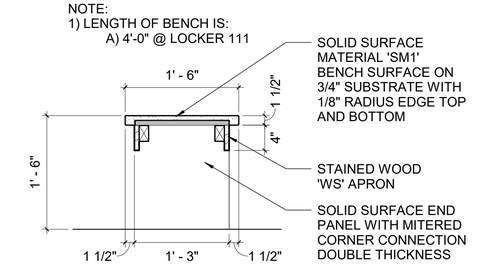
3 ACCESSIBLE SAFE ROOM SHELF AT CMU WALL
A5.09 1" = 1'-0"



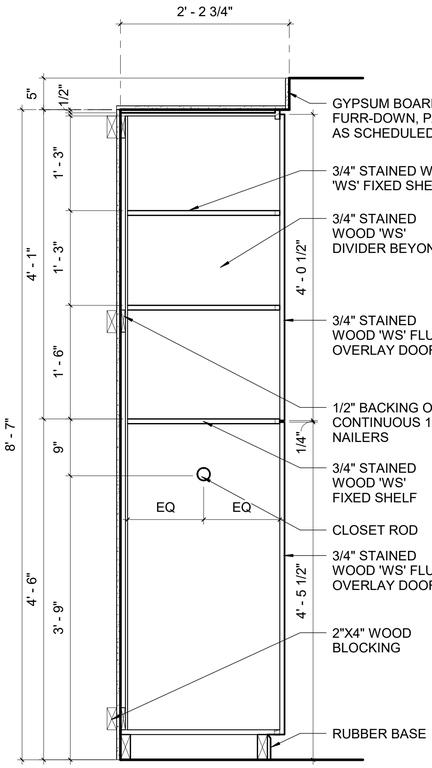
4 BATHROOM SHELF AT STUD WALL
A5.09 1" = 1'-0"



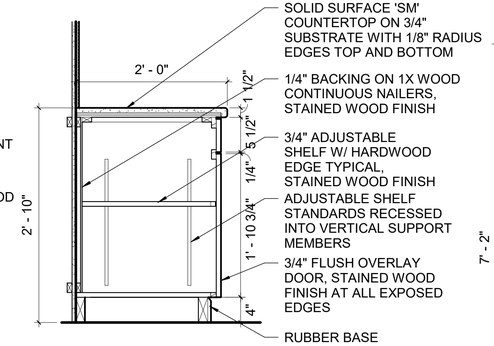
5 ACCESSIBLE SHOWER BENCH
A5.09 1" = 1'-0"



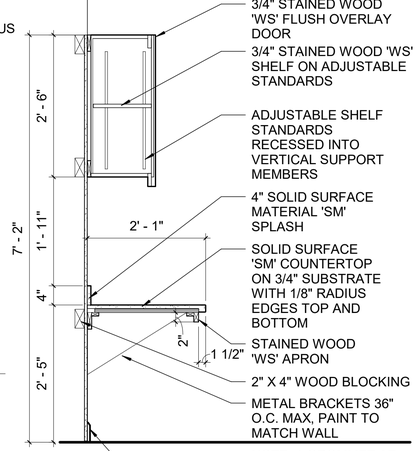
6 LOCKERS BENCH
A5.09 1" = 1'-0"



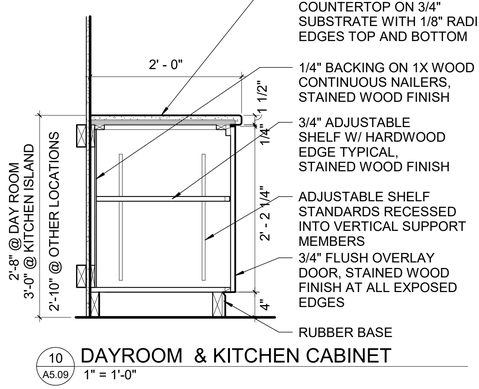
7 MILLWORK SECTION DETAIL
A5.09 1" = 1'-0"



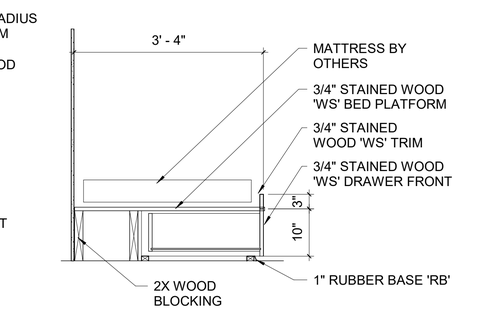
8 MILLWORK SECTION DETAIL
A5.09 1" = 1'-0"



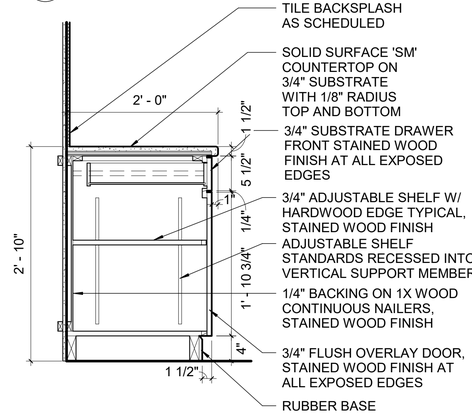
9 REPORTS UPPER AND LOWER
A5.09 3/4" = 1'-0"



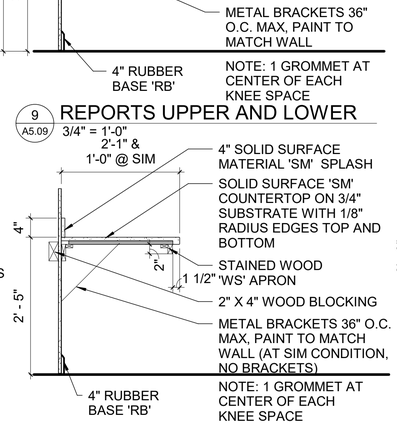
10 DAYROOM & KITCHEN CABINET
A5.09 1" = 1'-0"



11 BED DRAWER
A5.09 3/4" = 1'-0"

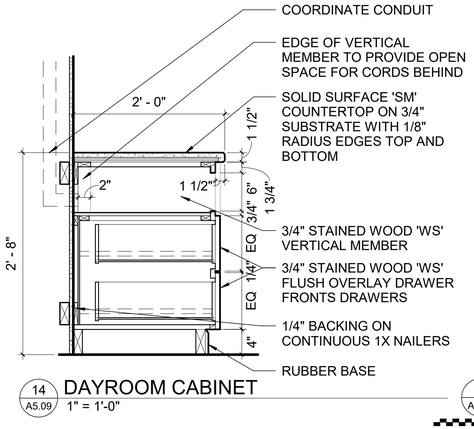


12 MILLWORK SECTION DETAIL
A5.09 1" = 1'-0"

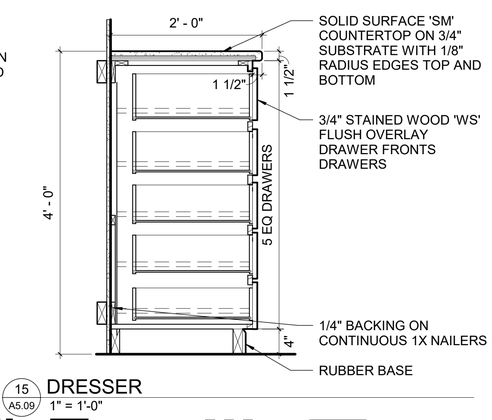


13 REPORTS LOWER
A5.09 3/4" = 1'-0"

14 DAYROOM CABINET
A5.09 1" = 1'-0"



15 DRESSER
A5.09 1" = 1'-0"



GRAPHIC SCALE: 1" = 1'-0"

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT — KIM A. KOMATSU — 6843 — STATE OF TEXAS

ISSUE DATE: 11/07/19

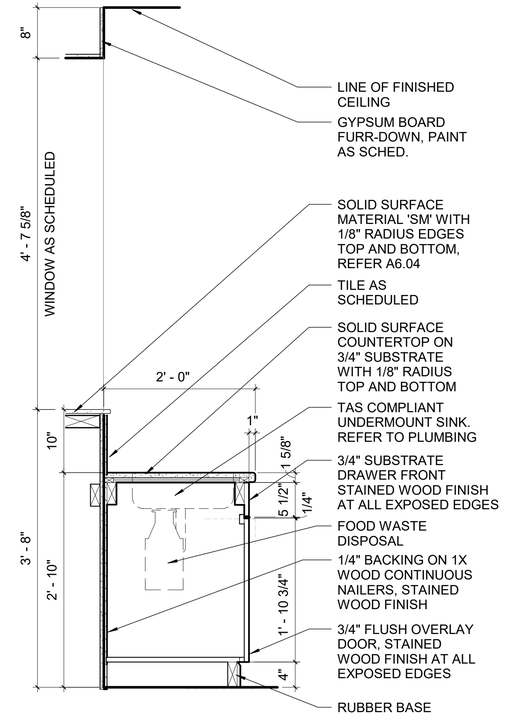
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

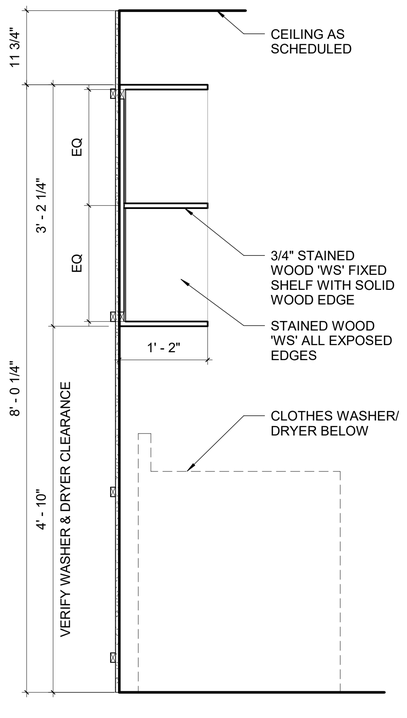
MILLWORK DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.09

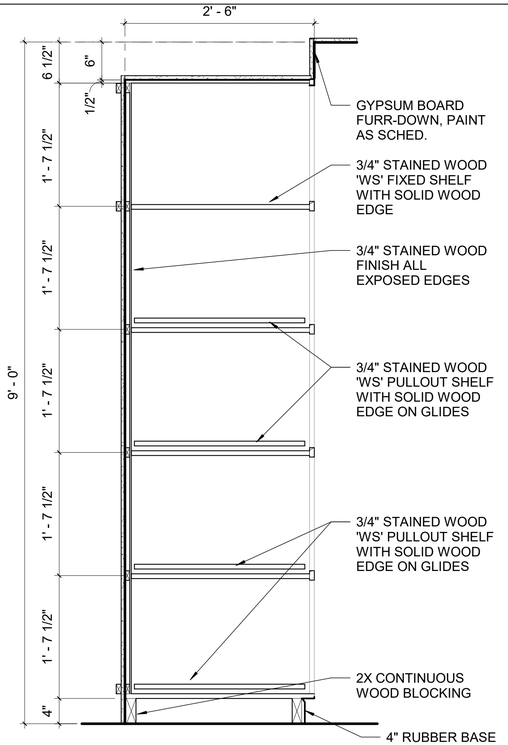
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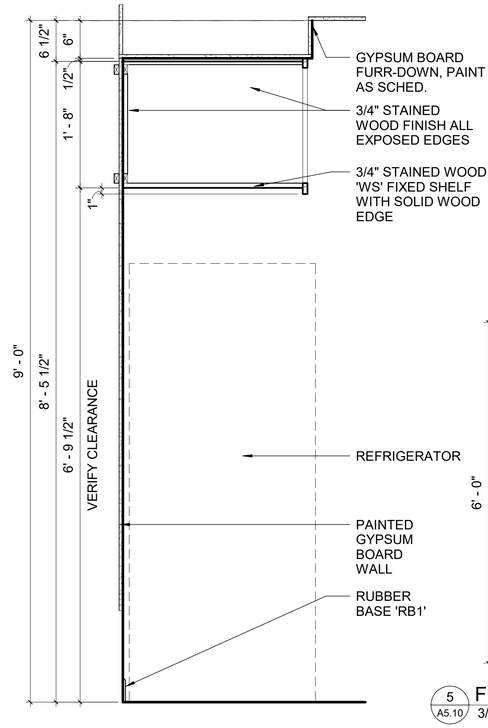
1 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



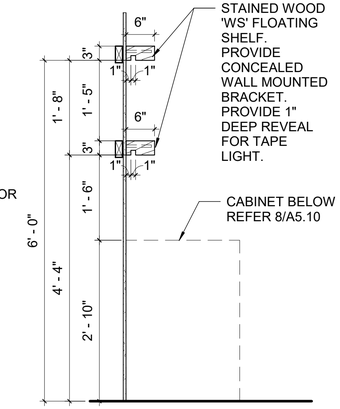
2 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



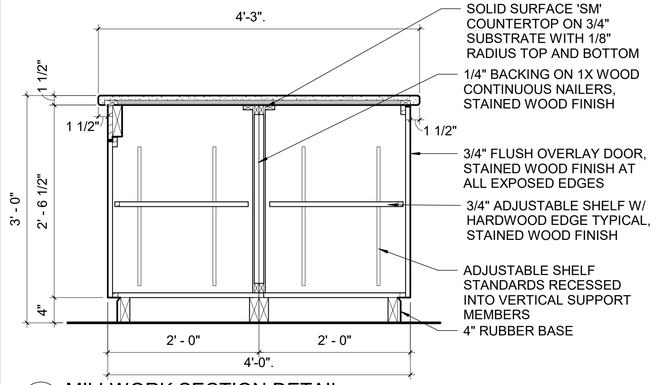
3 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



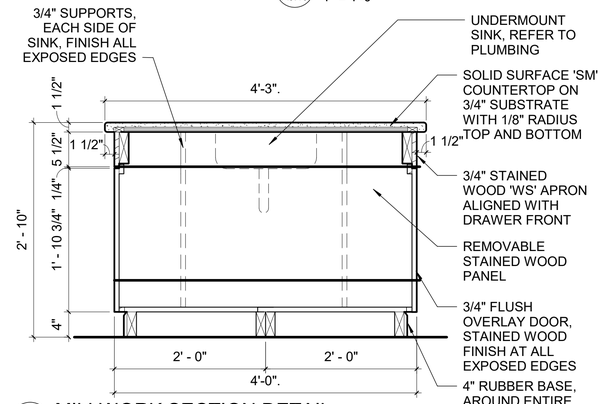
4 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



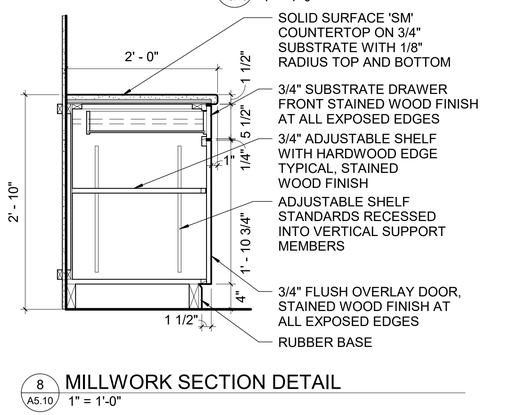
5 A5.10 FLOATIG SHELF @ KITCHEN
3/4" = 1'-0"



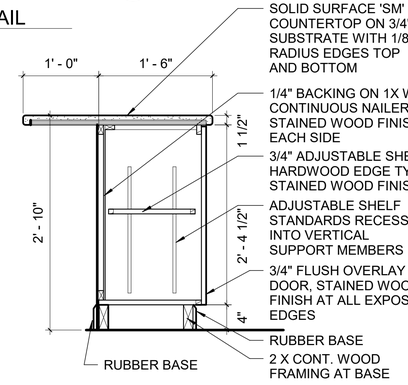
1 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



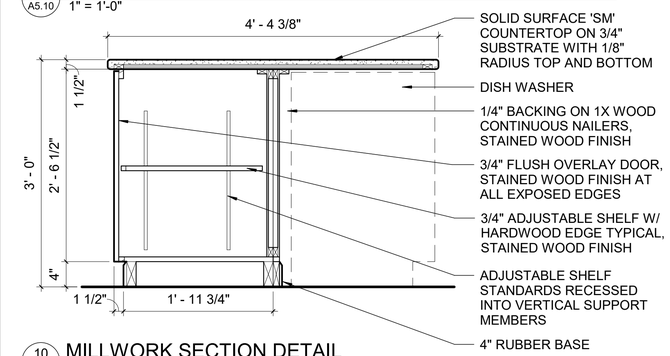
7 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



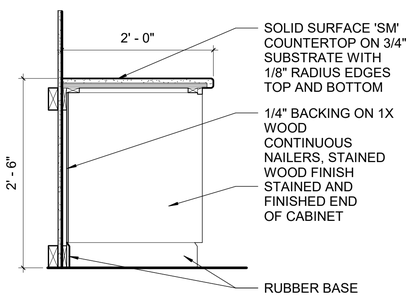
8 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



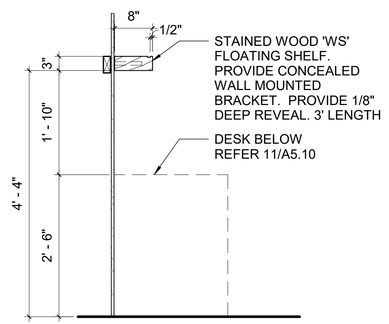
9 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



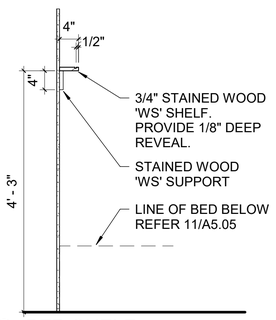
10 A5.10 MILLWORK SECTION DETAIL
1" = 1'-0"



11 A5.10 DESK SECTION DETAIL
1" = 1'-0"



12 A5.10 FLOATING SHELF @ DORM RM
3/4" = 1'-0"



13 A5.10 BED SHELF
3/4" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1" = 1'-0"

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS
ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

MILLWORK DETAILS

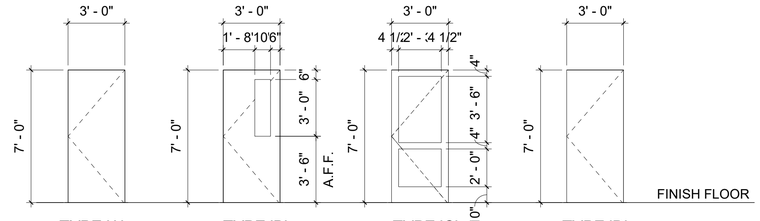
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A5.10

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DOOR AND FRAME SCHEDULE

DOOR NUMBER	DOOR SIZE WIDTH	DOOR SIZE HEIGHT	DOOR SIZE THK.	DOOR TYPE	DOOR MATERIAL	DOOR GLAZING	FRAME TYPE	FRAME MATERIAL	FRAME DETAILS HEAD	FRAME DETAILS JAMB (1)	FRAME DETAILS JAMB (2)	FRAME DETAILS SILL	HARDWARE SET NUMBER	HARDWARE KEYSIDE RM NUMBER	FIRE RATING	SIGN	NOTES BY SYMBOL
01	3' - 0"	7' - 0"	2"	C	ALUM	DG-2	F3	ALUM	2/A6.04	11/A6.04	11/A6.04	22/A6.03	715A	EXTERIOR			6
02	3' - 0"	7' - 0"	1 3/4"	C	ALUM	DG-2	F2	ALUM	1/A6.03	8/A6.03	8/A6.03	22/A6.03	C715A	EXTERIOR			5
03	3' - 0"	7' - 0"	1 3/4"	C	ALUM	DG-2	F2	ALUM	1/A6.03	8/A6.03	8/A6.03	22/A6.03	C715A	EXTERIOR			5
04	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	2/A6.03	9/A6.03	9/A6.03	24/A6.03	C715	EXTERIOR			5
05	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
06	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
07	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
08	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
09	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	2/A6.03	9/A6.03	9/A6.03	24/A6.03	C715	EXTERIOR			5
10	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	2/A6.03	9/A6.03	9/A6.03	24/A6.03	C715	EXTERIOR			5
11	10' - 0"	12' - 0"	1 1/2"	J	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
12	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
13	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
14	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
15	14' - 0"	14' - 0"	1 1/2"	H	ALUM	DG-2	-	ALUM	3/A6.03	10/A6.03	10/A6.03	23/A6.03	001	EXTERIOR			4
16	3' - 0"	7' - 0"	1 3/4"	D	WD		F2	HM	18/A6.04	21/A6.04	21/A6.04	18/A6.03	C785I	101	SMOKE SEAL		3, 5
17	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	503	101		B	
18	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	503	103			
19	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	25/A6.03	731G	107			
20	6' - 0"	7' - 0"	1 3/4"	E	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	12/A6.03	210C	103			
21	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	301	103			
22	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	C701G	101			5
23	3' - 0"	7' - 0"	1 3/4"	A	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	23/A6.04	303G	108	-		
24	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	14/A6.03	103	107			
25	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	391C	109		A	
26	3' - 0"	7' - 0"	1 3/4"	A	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	12/A6.03	801	107	-		
27	3' - 0"	7' - 0"	1 3/4"	ICC 500	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	12/A6.03	W391	111	90 MIN	A	2
28	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	801	111			
29	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	391	113			
30	3' - 0"	7' - 0"	1 3/4"	A	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	201	116	-	A	
31	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	C201	116			5
32	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	C201	116			5
33	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	C201C	116			5
34	3' - 0"	7' - 0"	1 3/4"	F	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	002	121			7
35	3' - 0"	7' - 0"	1 3/4"	B	WD	DG-1	F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	801	116	-		
36	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	503	127			
37	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	127			
38	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	303G	123			
39	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	12/A6.03	397	129			
40	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	19/A6.03	801	128			
41	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	801	128			
42	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	128			
43	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	128			
44	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	128			
45	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	128			
46	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	11/A6.03	303G	128			
47	3' - 0"	7' - 0"	1 3/4"	D	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	25/A6.03	303G	128			
48	3' - 0"	7' - 0"	1 3/4"	A	WD		F1	HM	4/A6.03	6/A6.03	6/A6.03	24/A6.03	731G	137	-		
49	3' - 0"	7' - 0"	1 3/4"	G	HM		F2	HM	18/A6.04	21/A6.04	21/A6.04	13/A6.03	C785	138	SMOKE SEAL		3, 5
50	3' - 0"	7' - 0"	1 3/4"	G	HM		F2	HM	21/A6.04	21/A6.04	6/A6.03	18/A6.03	785	138	SMOKE SEAL		3
51	3' - 0"	7' - 0"	1 3/4"	D	WD		F2	HM	19/A6.04	22/A6.04	22/A6.04	12/A6.03	301	139			
52	6' - 0"	7' - 0"	1 3/4"	E	HM		F2	HM	19/A6.04	22/A6.04	22/A6.04	13/A6.03	584	138	SMOKE SEAL		3
53	6' - 0"	7' - 0"	1 3/4"	E	HM		F2	HM	19/A6.04	22/A6.04	22/A6.04	13/A6.03	584	138	SMOKE SEAL		3
54	6' - 0"	7' - 0"	1 3/4"	E	HM		F2	HM	19/A6.04	22/A6.04	22/A6.04	13/A6.03	584	138	SMOKE SEAL		3
55	3' - 0"	7' - 0"	1 3/4"	G	HM		F2	HM	18/A6.04	21/A6.04	21/A6.04	18/A6.03	C785	138	SMOKE SEAL		3, 5
56	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	18/A6.04	21/A6.04	21/A6.04	13/A6.03	585	138	SMOKE SEAL		3
57	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	18/A6.04	21/A6.04	21/A6.04	13/A6.02	C285	138	SMOKE SEAL		3, 5
58	3' - 0"	7' - 0"	1 3/4"	D	HM		F2	HM	18/A6.04	21/A6.04	21/A6.04	13/A6.02	C285	138	SMOKE SEAL		3, 5
59	6' - 0"	7' - 0"	1 3/4"	E	HM		F2	HM	19/A6.04	22/A6.04	22/A6.04	17/A6.02	C284IS	138	SMOKE SEAL	B	1, 3, 5

DOOR TYPES

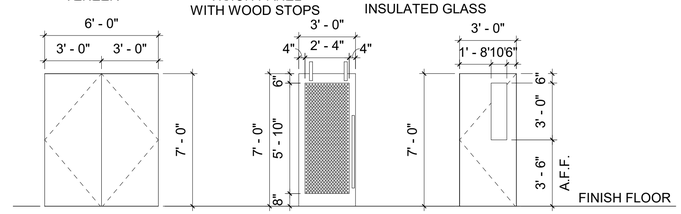


TYPE 'A'
FLUSH SOLID CORE STAINED WOOD VENEER

TYPE 'B'
SOLID CORE PAINTED WOOD VISION PANEL WITH WOOD STOPS

TYPE 'C'
ALUMINUM STOREFRONT DOOR WITH INSULATED GLASS

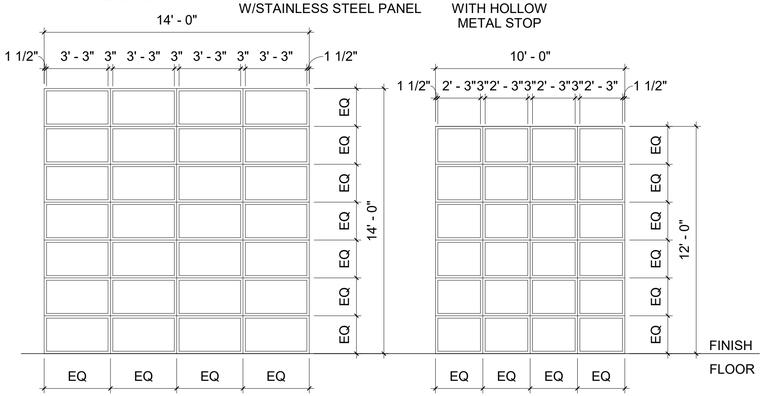
TYPE 'D'
FLUSH HOLLOW METAL PAINTED



TYPE 'E'
HOLLOW METAL FLUSH RATED PAINTED DOOR

TYPE 'F'
FLUSH SOLID CORE STAINED WOOD VENEER BARN DOOR W/STAINLESS STEEL PANEL

TYPE 'G'
FLUSH HOLLOW METAL PAINTED VISION PANEL WITH HOLLOW METAL STOP



TYPE 'H'
OVERHEAD DOOR WITH UV PROTECTION FILM ON INSULATED GLAZING

TYPE 'J'
OVERHEAD DOOR WITH UV PROTECTION FILM ON INSULATED GLAZING

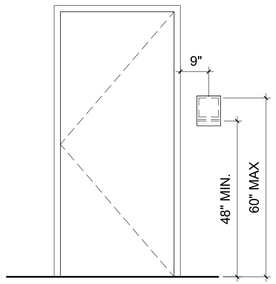
DOOR SCHEDULE - GENERAL NOTES

A. REFER TO G0.01 FOR SYMBOLS LEGEND.
B. DG-1 INTERIOR DOOR GLAZING SHALL BE 1/4" CLEAR TEMPERED GLASS
C. DG-2 EXTERIOR DOOR GLAZING SHALL BE 1" LOW E TEMPERED GLASS: VITRO SOLARBAN 90 LOW-E CLEAR GLASS
D. REFERENCE SPECIFICATIONS FOR HARDWARE SET

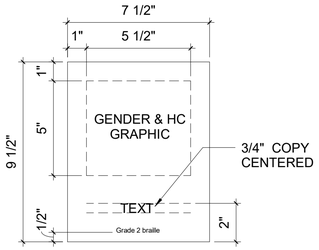
NOTES BY NUMBER

" X "

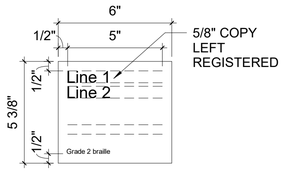
1. PROVIDE CHAIN ON APPARATUS BAY (140) SIDE OF DOOR.
2. DOOR TO MEET ICC 500 SAFE ROOM STANDARDS
3. DOOR TO HAVE CLOSER IN HARDWARE SET
4. UV PROTECTION FILM ON GLAZING
5. CARD READER
6. DOOR BELL
7. STAINLESS STEEL PERFORATED PANEL INSERT, HOLES TO BE .045" ON .088" STAGGER (24% OPEN AREA)



1 A6.01 INTERIOR SIGNAGE ELEVATION
1/2" = 1'-0"

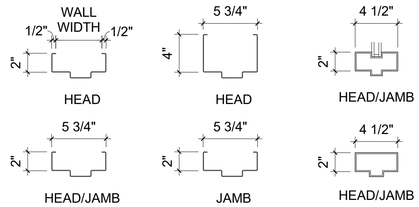


2 A6.01 TAS ROOM SIGNAGE - TYPE A
3" = 1'-0"



3 A6.01 TYPICAL ROOM SIGN - TYPE B
3" = 1'-0"

FRAME TYPES



TYPE F1
HOLLOW METAL

TYPE F2
HOLLOW METAL

TYPE F3
ALUMINUM



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

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

GRAPHIC SCALE: 3" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

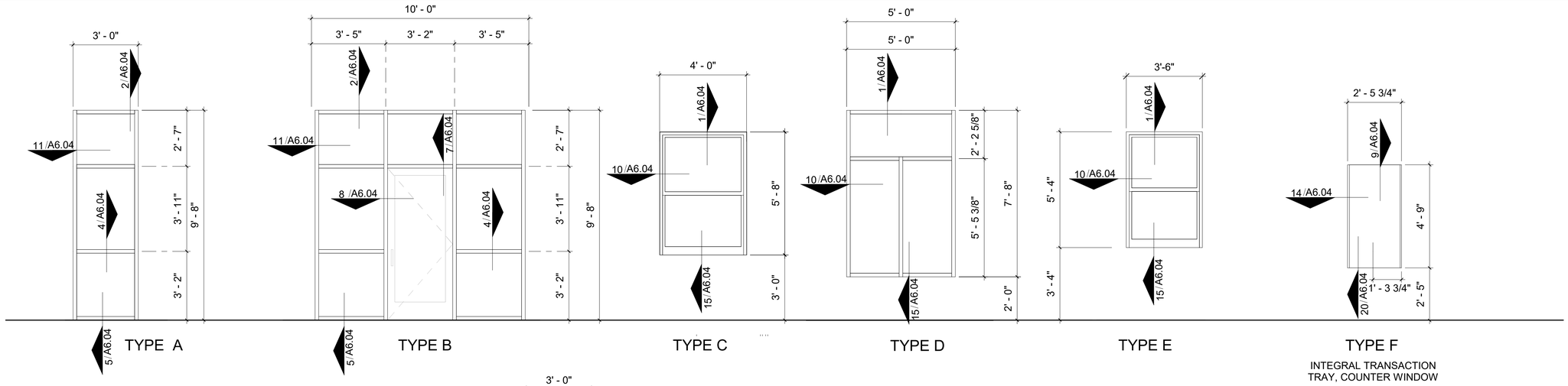
MANSFIELD FIRE STATION NO. 5

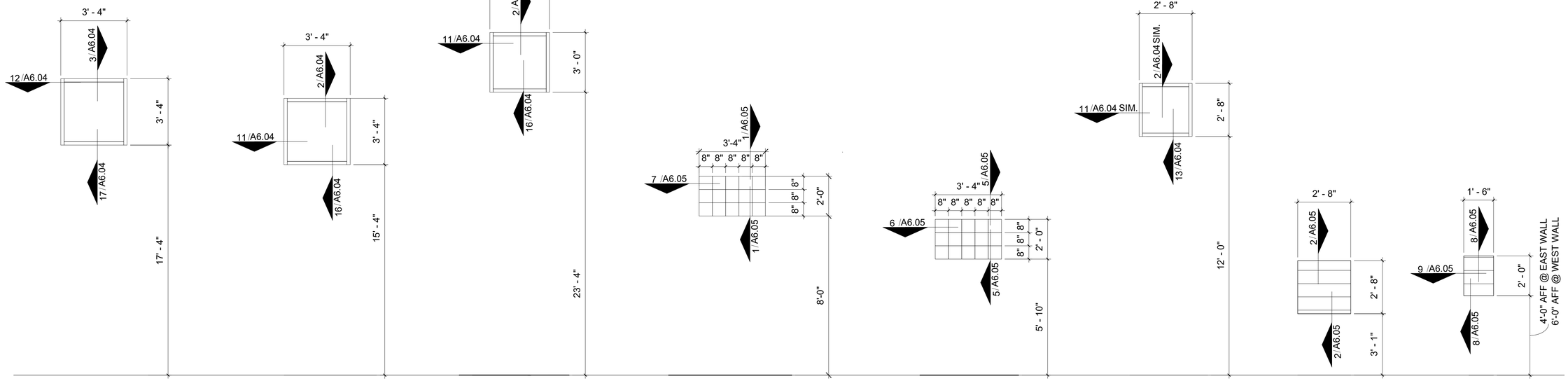
4444 National Parkway
Mansfield, Texas 76063

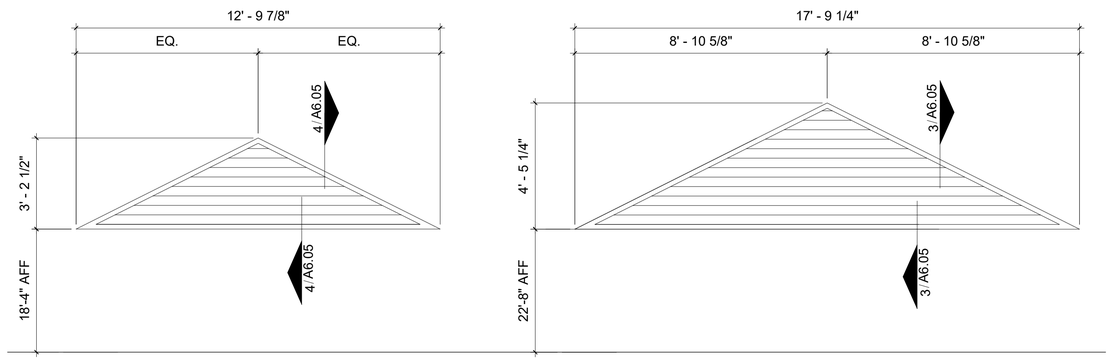
DOOR SCHEDULE

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A6.01

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WINDOW SCHEDULE - GENERAL NOTES

1. DIMENSIONED FROM FIRST FLOOR LEVEL UNLESS NOTED OTHERWISE
2. ALL DIMENSIONS ARE FROM OUTSIDE OF WINDOW TO CENTERLINE OF WINDOW MULLIONS UNLESS NOTED OTHERWISE

GLASS LEGEND

G1: ALL INTERIOR GLASS SHALL BE 1/4" CLEAR TEMPERED GLASS
G2: ALL EXTERIOR GLASS SHALL BE 1" INSULATED LOW E TEMPERED GLASS UNLESS OTHERWISE NOTED: VITRO CLEAR LOW-E GLASS

2' 0 2' 4' 8'
GRAPHIC SCALE: 3/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT
KARL A. KOMATSU
6843
STATE OF TEXAS
ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

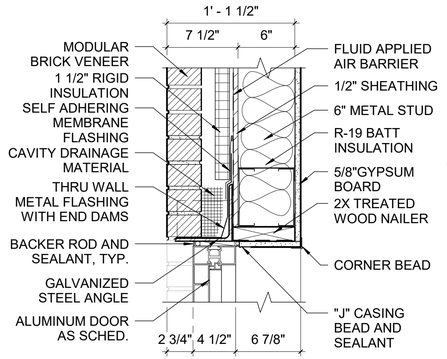
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

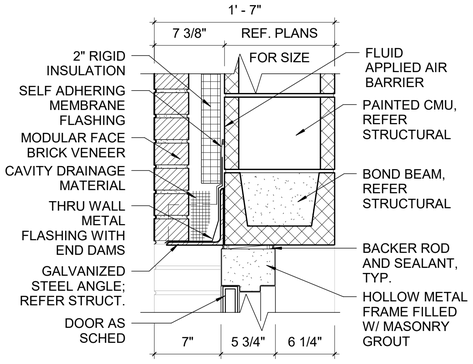
WINDOW & LOUVER SCHEDULE

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A6.02

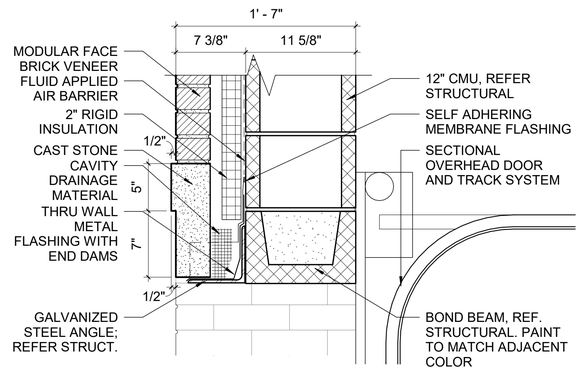
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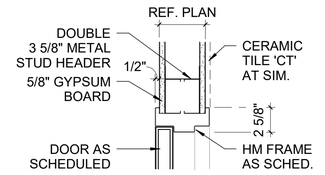
1 A6.03 HEAD DETAIL
1 1/2" = 1'-0"



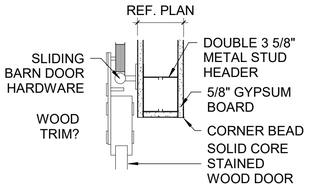
2 A6.03 HEAD DETAIL
1 1/2" = 1'-0"



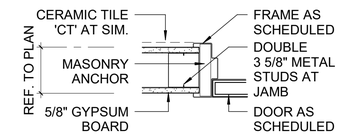
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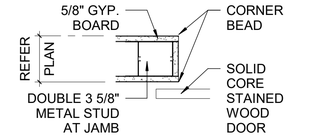
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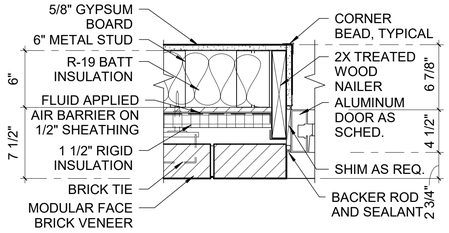
5 A6.03 HEAD DETAIL
1 1/2" = 1'-0"



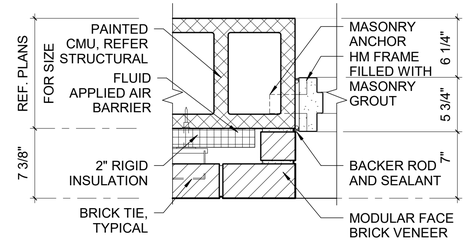
6 A6.03 JAMB DETAIL
1 1/2" = 1'-0"



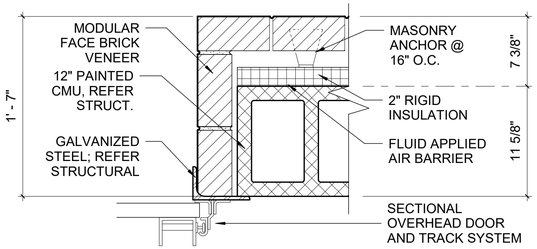
7 A6.03 JAMB DETAIL
1 1/2" = 1'-0"



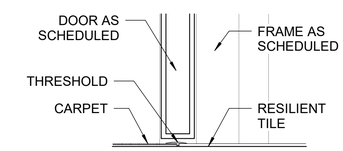
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1 1/2" = 1'-0"



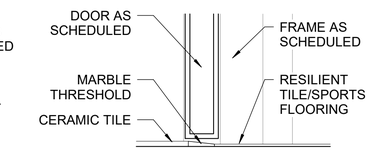
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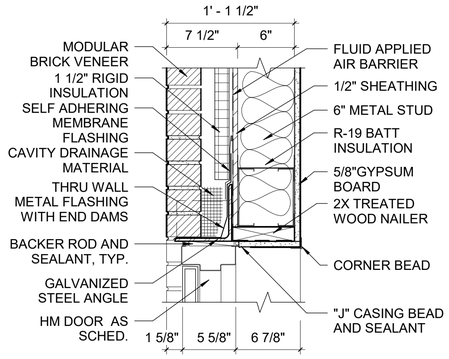
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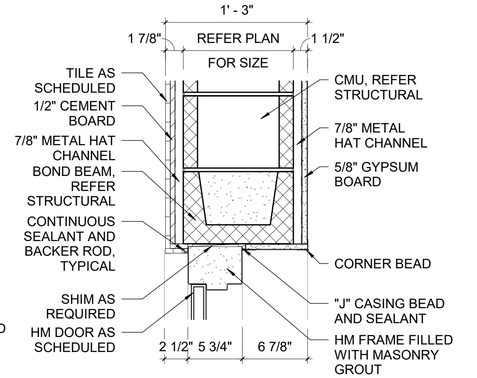
11 A6.03 SILL DETAIL
3" = 1'-0"



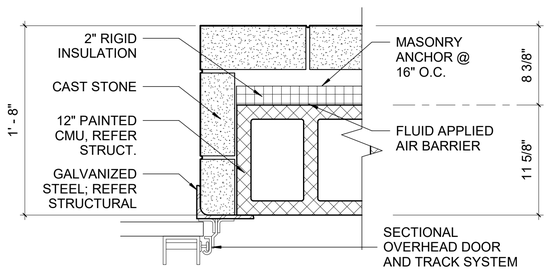
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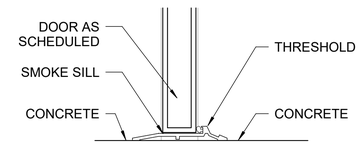
15 A6.03 HEAD DETAIL
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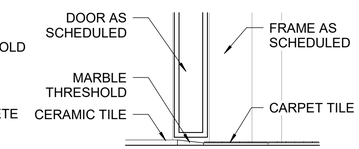
16 A6.03 HEAD DETAIL
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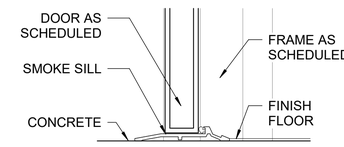
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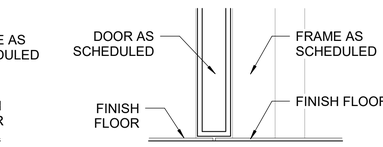
13 A6.03 SILL DETAIL
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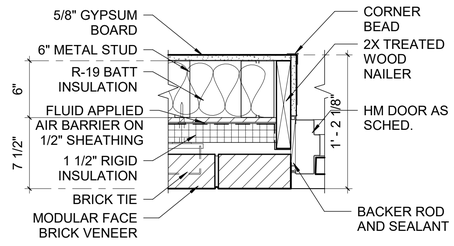
14 A6.03 SILL DETAIL
3" = 1'-0"



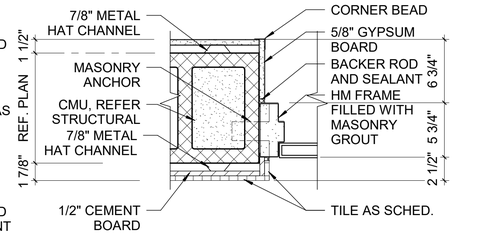
18 A6.03 SILL DETAIL
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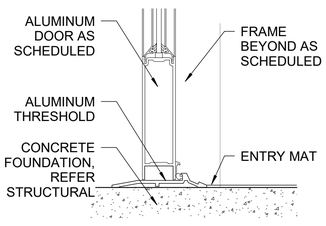
19 A6.03 SILL DETAIL
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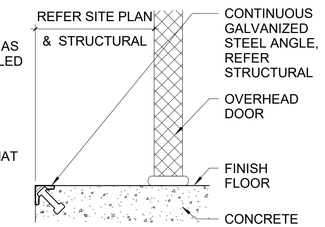
20 A6.03 JAMB DETAIL
1 1/2" = 1'-0"



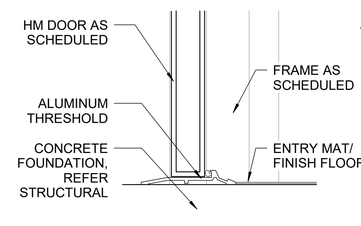
21 A6.03 JAMB DETAIL
1 1/2" = 1'-0"



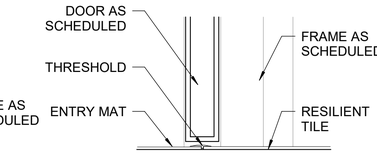
22 A6.03 SILL DETAIL
3" = 1'-0"



23 A6.03 SILL DETAIL
3" = 1'-0"



24 A6.03 SILL DETAIL
3" = 1'-0"



25 A6.03 SILL DETAIL
3" = 1'-0"

3" 0 3" 6" 1'
GRAPHIC SCALE: 3" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

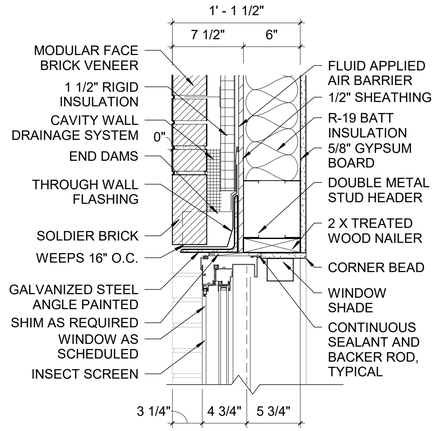
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

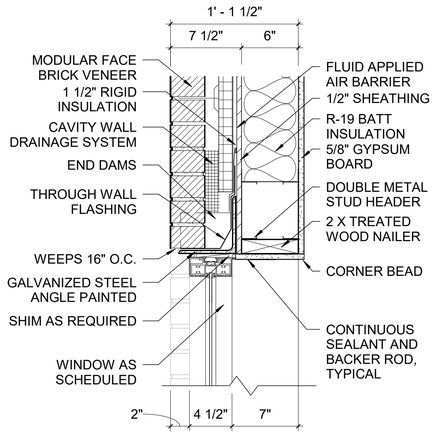
DOOR DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A6.03

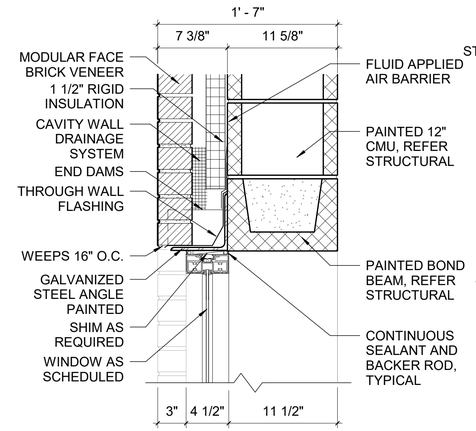
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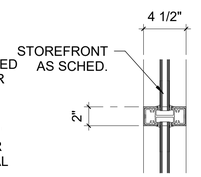
1 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



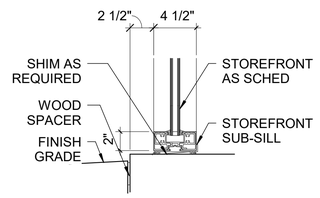
2 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



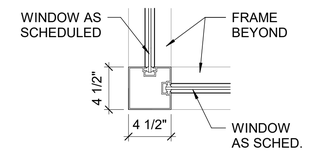
3 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



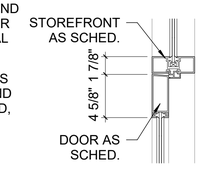
4 A6.04 MULLION DETAIL
1 1/2" = 1'-0"



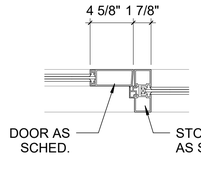
5 A6.04 SILL DETAIL
1 1/2" = 1'-0"



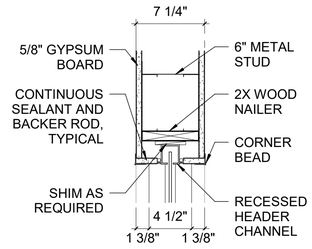
6 A6.04 CORNER MULLION
1 1/2" = 1'-0"



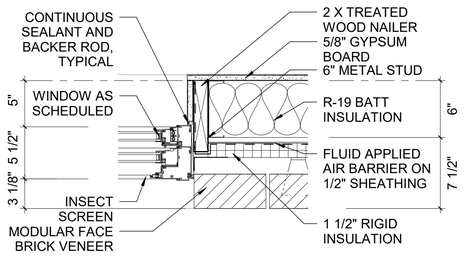
7 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



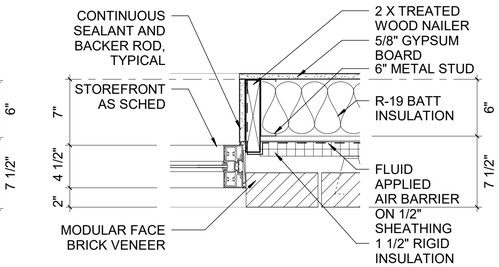
8 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



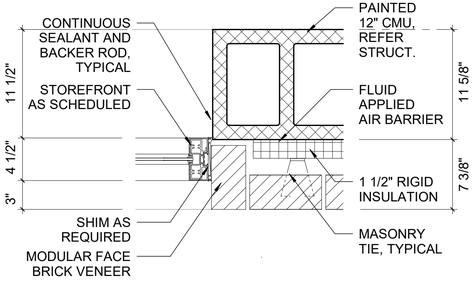
9 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



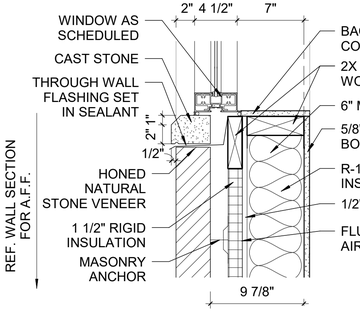
10 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



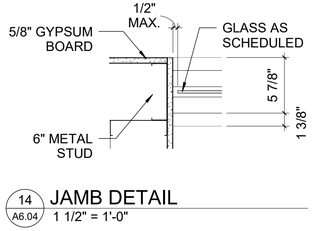
11 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



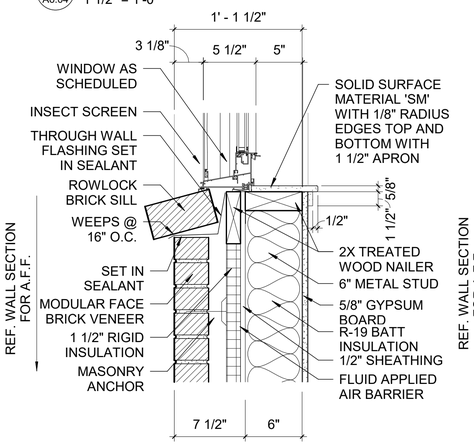
12 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



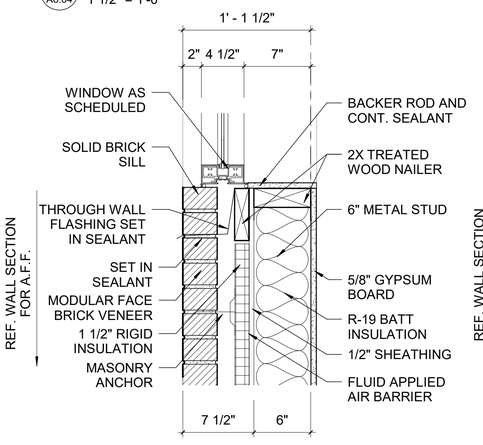
13 A6.04 SILL DETAIL
1 1/2" = 1'-0"



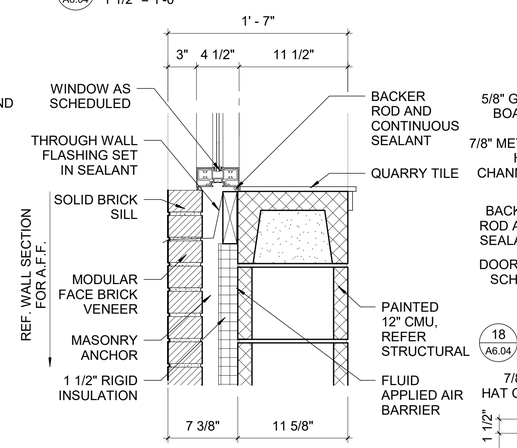
14 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



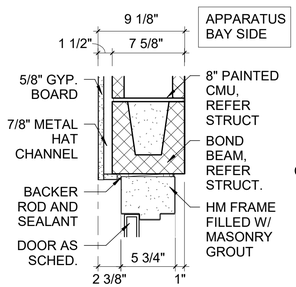
10 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



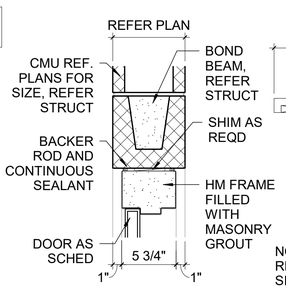
11 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



12 A6.04 JAMB DETAIL
1 1/2" = 1'-0"

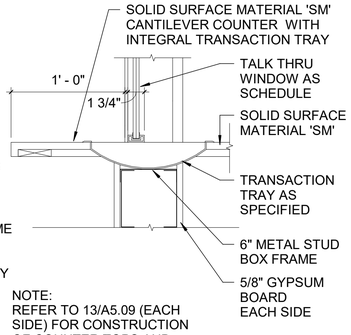


13 A6.04 SILL DETAIL
1 1/2" = 1'-0"

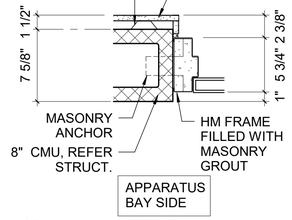


18 A6.04 HEAD DETAIL
1 1/2" = 1'-0"

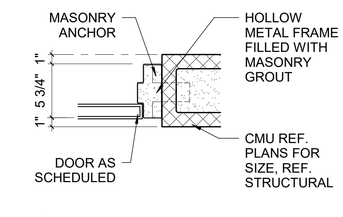
19 A6.04 HEAD DETAIL
1 1/2" = 1'-0"



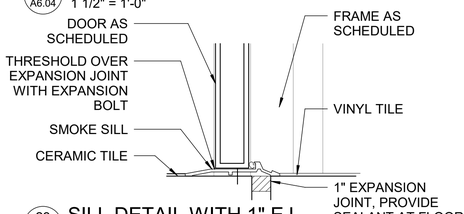
20 A6.04 SILL DETAIL
1 1/2" = 1'-0"



21 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



22 A6.04 JAMB DETAIL
1 1/2" = 1'-0"



23 A6.04 SILL DETAIL WITH 1" EJ
3" = 1'-0"

16 A6.04 SILL DETAIL
1 1/2" = 1'-0"

17 A6.04 SILL DETAIL
1 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS
ISSUE DATE: 11/07/19

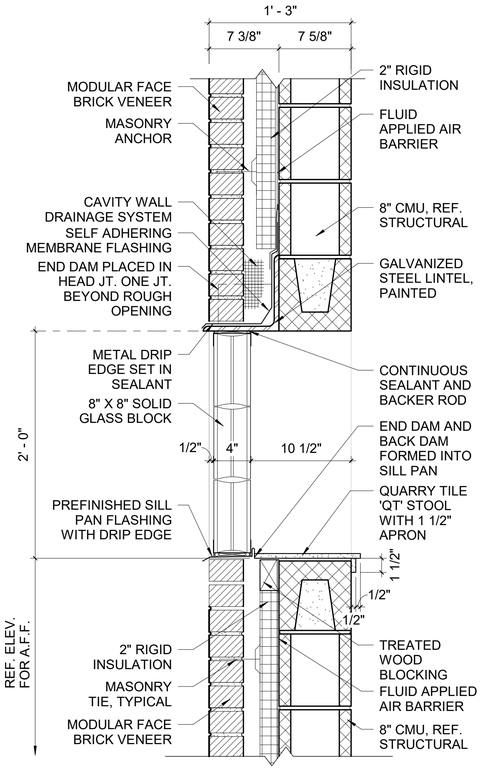
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

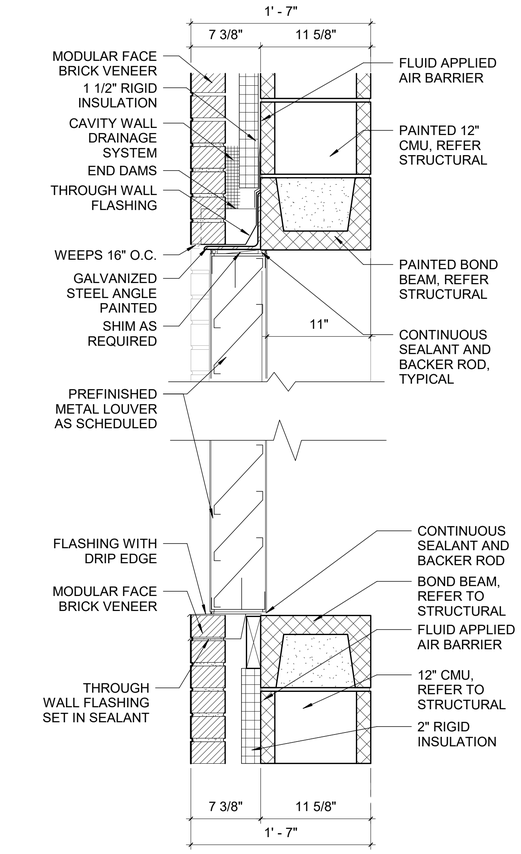
DOOR/WINDOW DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A6.04

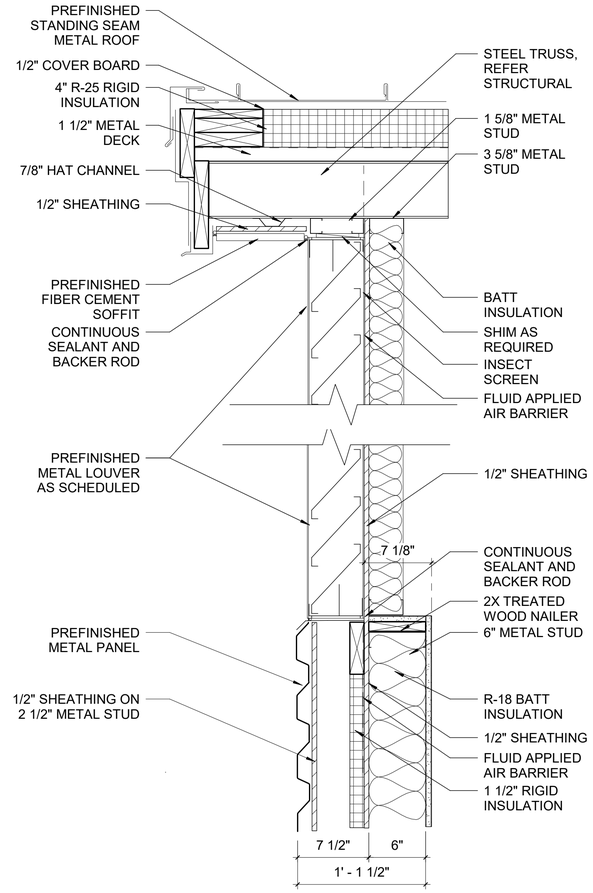
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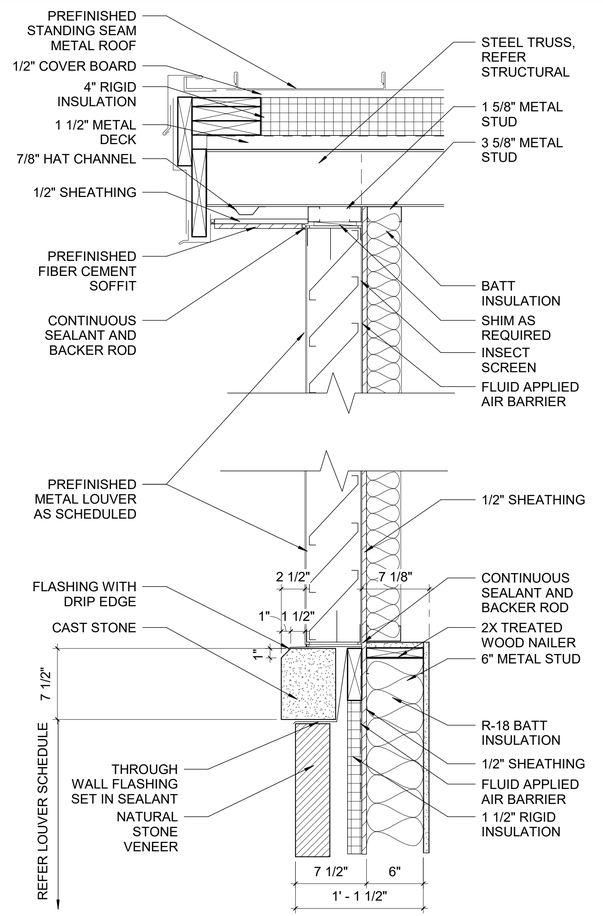
1 A6.05 GLASS BLOCK DETAIL
1 1/2" = 1'-0"



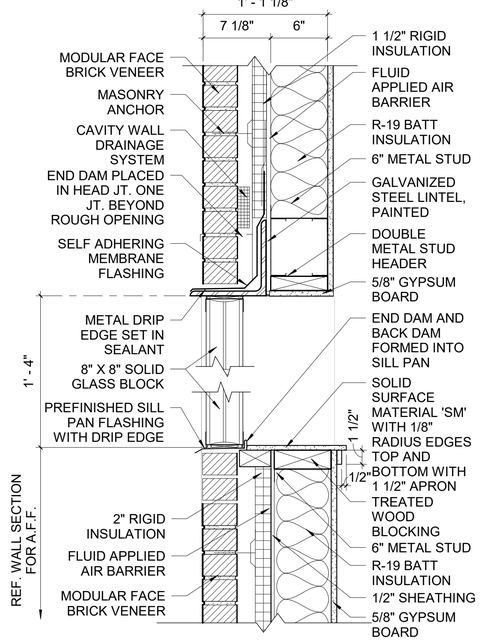
2 A6.05 Louver Head & Sill Detail @ CMU Wall
1 1/2" = 1'-0"



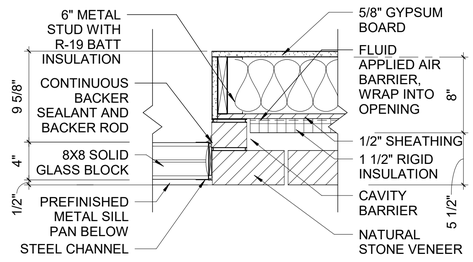
3 A6.05 LOUVER AT METAL PANEL
1 1/2" = 1'-0"



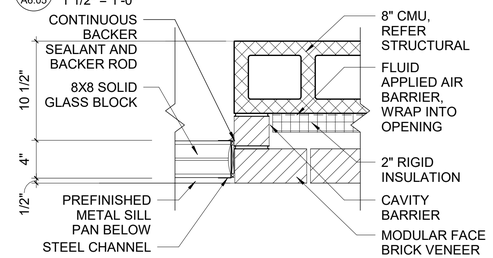
4 A6.05 LOUVER AT STONE
1 1/2" = 1'-0"



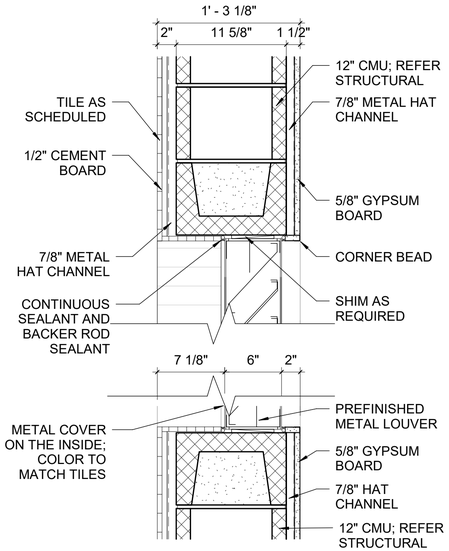
5 A6.05 GLASS BLOCK DETAIL
1 1/2" = 1'-0"



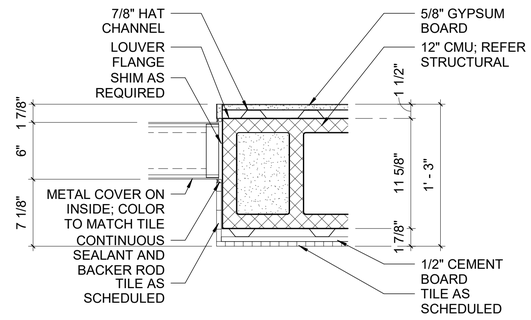
6 A6.05 GLASS BLOCK JAMB DETAIL
1 1/2" = 1'-0"



7 A6.05 GLASS BLOCK JAMB DETAIL
1 1/2" = 1'-0"



8 A6.05 HEAD & sILL DETAIL
1 1/2" = 1'-0"



9 A6.05 JAMB DETAIL
1 1/2" = 1'-0"

6" 0 6" 1' 2'
GRAPHIC SCALE: 1-1/2" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

REGISTERED ARCHITECT KARL A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

ISSUE FOR CONSTRUCTION

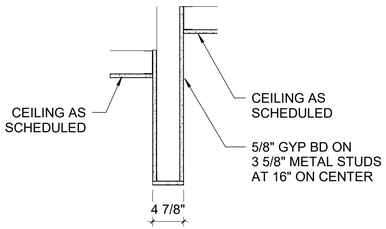
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

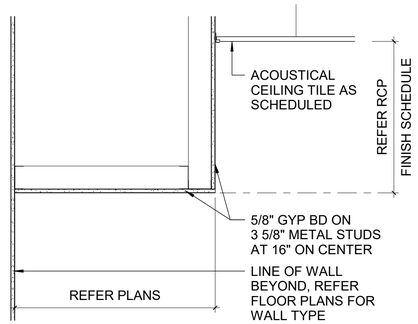
WINDOW & LOUVER DETAILS

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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A6.05

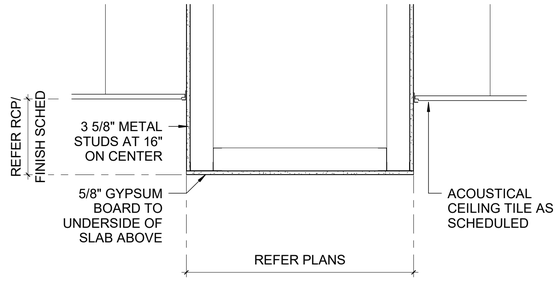
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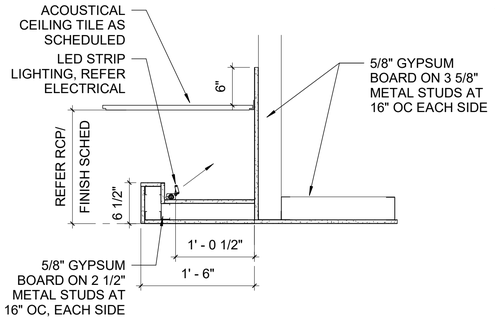
2 A7.01 FURR DOWN DETAIL
1" = 1'-0"



3 A7.01 FURR DOWN DETAIL
1" = 1'-0"



4 A7.01 FURR DOWN DETAIL
1" = 1'-0"



5 A7.01 FURR DOWN DETAIL
1" = 1'-0"

GENERAL NOTES

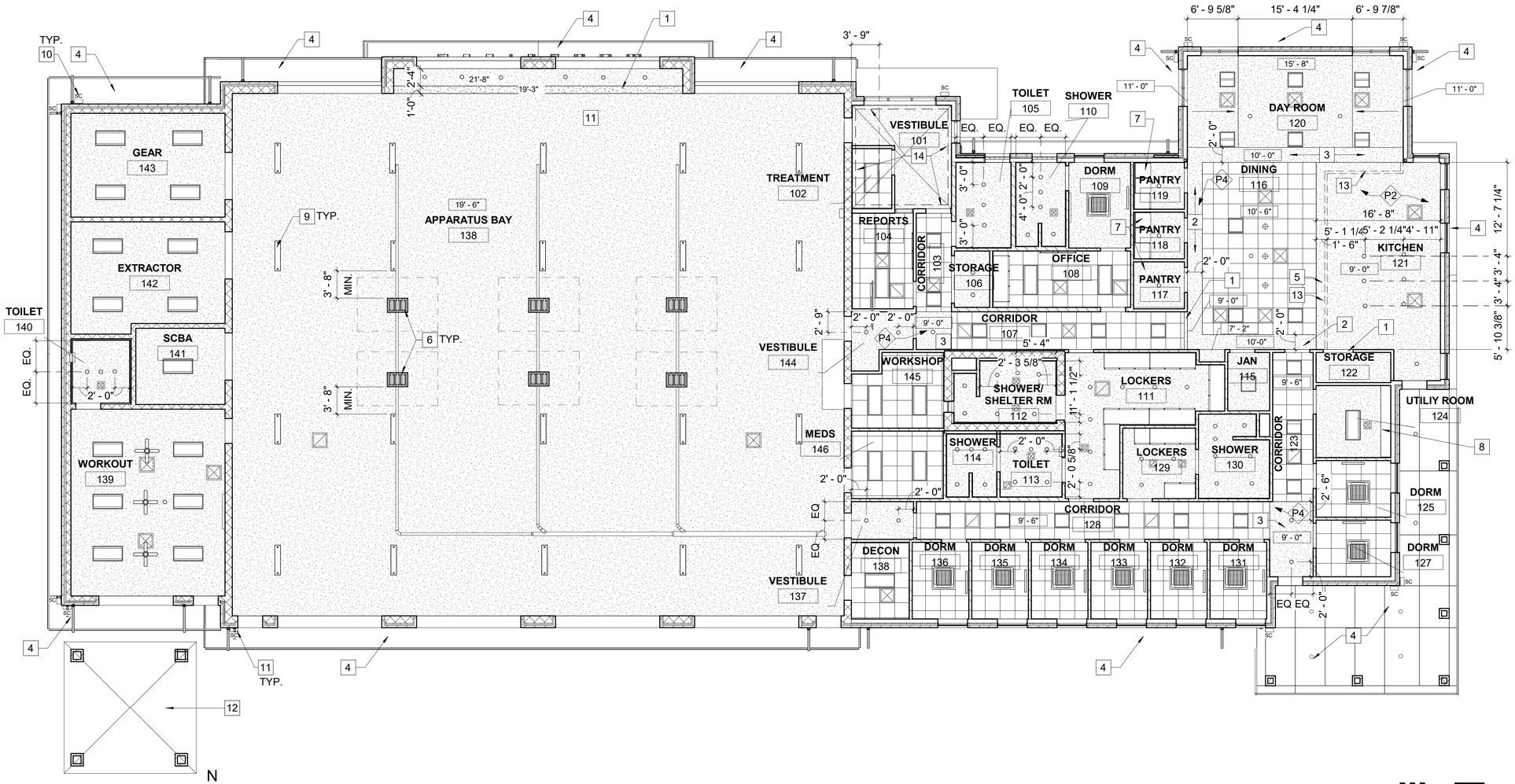
A. CENTER CAN LIGHTS IN ROOM
B. CENTER CAN LIGHT IN SHOWER STALL
C. FOR MEZZANINE 147 LIGHT TYPE AND LAYOUT, REFER ELECTRICAL

NOTES BY NUMBER

1. GYPSUM BOARD FURRDOWN REFER 2/A7.01
2. GYPSUM BOARD FURRDOWN REFER 3/A7.01
3. GYPSUM BOARD FURRDOWN REFER 4/A7.01
4. SMOOTH PREFINISHED FIBER CEMENT SOFFIT WITH H - MOLDING PERPENDICULAR TO WALL FACE.
5. GYPSUM BOARD FURRDOWN & LIGHT COVER REFER 5/A7.01, REFER ELECTRICAL
6. RADIANT HEATERS, BOTTOM AT 15'-0" AFF, REFER MECHANICAL
7. GYPSUM BOARD FURR DOWN OVER CABINETS, REFER 3 & 4/A5.10
8. GYPSUM BOARD FURR DOWN OVER CABINETS, REFER 2/A5.10
9. TOP OF FIXTURE 14'-6" AFF TO BE OUTSIDE OF GAS HEATERS
10. SECURITY CAMERA STAINLESS STEEL BLANK PLATE, 12'-0" AFF, REFER ELECTRICAL
11. SLOPE CEILING TO MATCH TRUSS
12. EXPOSED STRUCTURE, WITH DOUBLE WALL METAL DECK
13. LED ROPE LIGHTING, REFER ELECTRICAL
14. UPLIGHT FIXTURE, BOTTOM OF FIXTURE AT 18'-8" AFF, REFER ELECTRICAL

CEILING LEGEND

- PAINTED GYPSUM BOARD CEILING
- 2 X 2 ACOUSTIC CEILING TILE
- 2 X 4 LIGHT FIXTURE
- 2 X 2 LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- WALL WASH LIGHT
- RECESSED LIGHT FIXTURE
- SUPPLY REGISTER
- RETURN REGISTER
- PENDANT LIGHT
- CEILING FAN
- CEILING CASSETTE
- SECURITY CAMERA BLANK PLATE



N

1 A7.01 FIRST FLOOR REFELCTED CEILING PLAN
1/8" = 1'-0"

GRAPHIC SCALE: 1" = 1'-0"

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

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT KIM A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

REFLECTED CEILING PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A7.01

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GENERAL NOTES

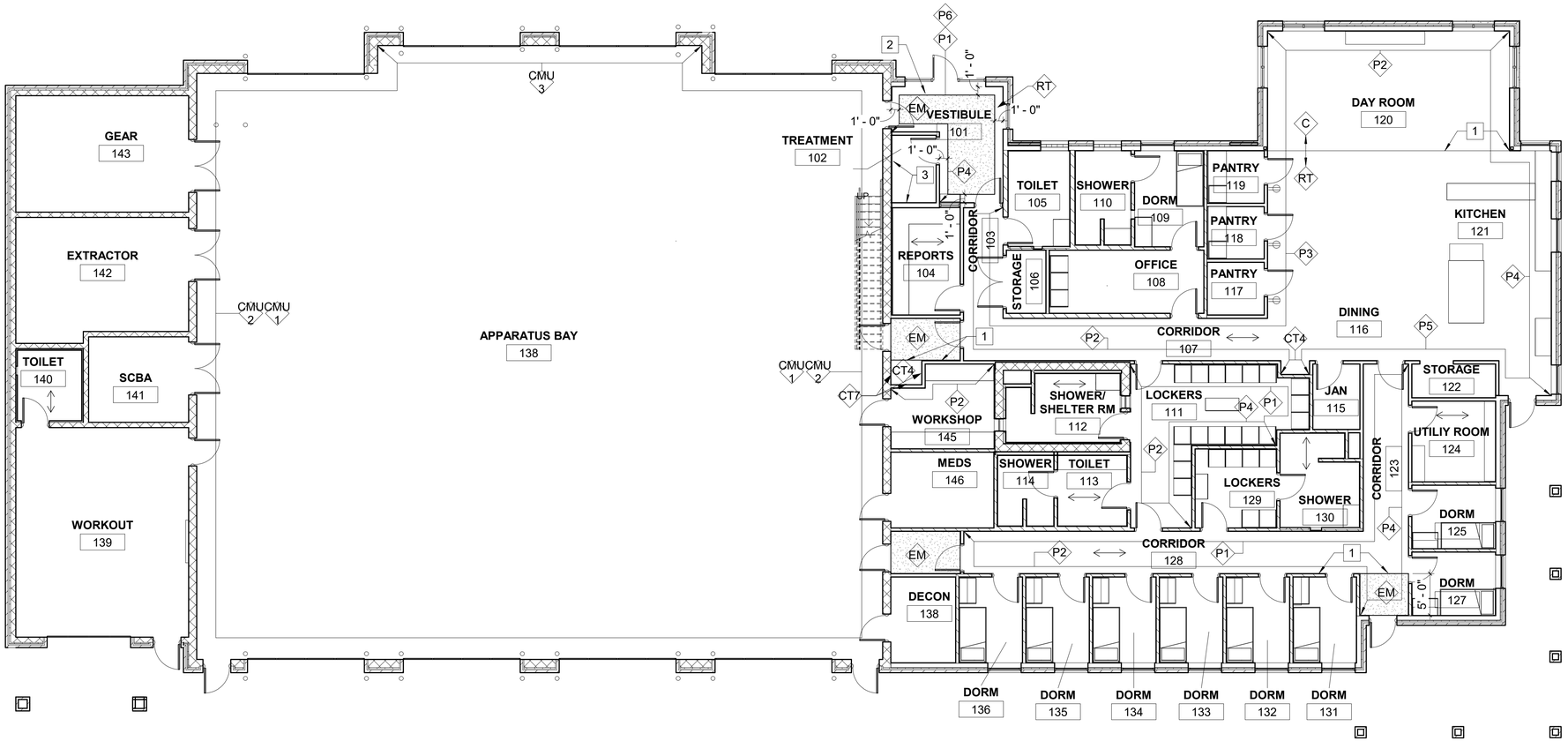
A. REFER TO SHEET A5.01 FOR FINISH SCHEDULE
B. REFER A5.01 FOR LOCATIONS OF SCUFF RESISTANT PAINT
C. REFER A5.05 FOR WALL COLOR LOCATIONS
D. ARROWS SHOW ON FLOOR FINISH AREAS REFER TO DIRECTION OF INSTALLATION.
E. FLOOR TILE TO BE LAID STARTING IN THE CENTER OF THE ROOM WITH WHOLE TILES
F. FULLY ADHERE CARPET ALONG EDGE OF CARPET TO RESILIENT TILE TRANSITION.

NOTES BY NUMBER "X"

1. ALIGN EDGE OF FLOORING MATERIAL WITH WALL
2. ENTRY MAT 1'-0" FROM ALL WALLS
3. TOWER WALL UP HIGH TO BE PAINTED P1 AND P6, REFER 4 & 5/A5.08

FINISH PLAN LEGEND

- RESILIENT TILE / CERAMIC TILE / CONCRETE FLOOR / CARPET / SPORTS FLOORING
- ENTRY MAT CARPET TILE
- DIRECTION OF TILE/CARPET INSTALLATION



N

1 / A8.01 FLOOR FINISH PLAN
1/8" = 1'-0"

4' 0 4' 8' 16'
GRAPHIC SCALE: 1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

REGISTERED ARCHITECT MARK A. KOMATSU 6843 STATE OF TEXAS

ISSUE DATE: 11/07/19

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

FINISH PLAN

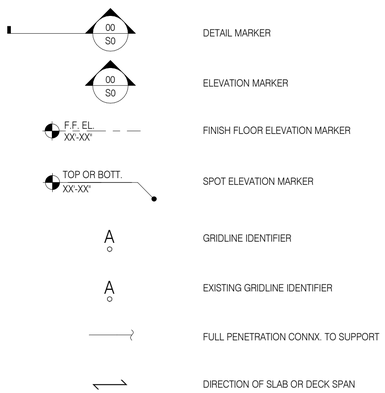
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	A8.01

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ABBREVIATIONS

A.B.	ANCHOR BOLT
ADDL	ADDITIONAL
ADJ.	ADJACENT
AFF	ABOVE FINISH FLOOR
ALT.	ALTERNATE
ARCH.	ARCHITECT
B.L.	BRICK LEDGE
BLDG	BUILDING
BM	BEAM
BOTT.	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CANT.	CANTILEVER
CIP	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
C.L.	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
C.O.	CUT OFF
CONTR.	CONTRACTOR
COL.(S)	COLUMN(S)
COMP.	COMPOSITE
CONC.	CONCRETE
CONNX.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CTR	CENTER
D.B.A.	DEFORMED BAR ANCHOR
DBL	DOUBLE
DET.	DETAIL
DFL	DOUGLAS FIR-LARCH
DIA.	DIAMETER
DIAG.	DIAGONAL
DWGS	DRAWINGS
DWL(S)	DOWEL(S)
EA.	EACH
E.F.	EACH FACE
E.J .	EXPANSION JOINT
EL.	ELEVATION
ELEV.	ELEVATOR
EMBED.	EMBEDMENT
ENGR	ENGINEER
EQ.	EQUAL
E.W.	EACH WAY
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.F.	FINISH FLOOR
F.F.E.	FINISH FLOOR ELEVATION
FLR	FLOOR
FDN	FOUNDATION
FS	FAR SIDE
FTG	FOOTING
F.V.	FIELD VERIFY
GA.	GAGE
GALV.	GALVANIZE
GR.	GRADE
HAS	HEADED ANCHOR STUD
HK	HOOK
HORIZ.	HORIZONTAL
HR	HARD ROCK
HT	HEIGHT
HSS	HOLLOW STEEL SECTION
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
IN.	INCH
INFO.	INFORMATION
INT.	INTERIOR
JT	JOINT
JST	JOIST
K	KIPS
K.O.	KNOCK OUT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LIGHT
LW	LIGHT WEIGHT
LVL	LEVEL
MFR	MANUFACTURER
MEZZ.	MEZZANINE
MID.	MIDDLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.L.	MATCH LINE
MAT.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
N.S.	NEAR SIDE
NSG	NON-SHRINK GROUT
NW	NORMAL WEIGHT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER
OPN'G	OPENING
O.H.	OPPOSITE HAND
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PC	PRECAST
PERP.	PERPENDICULAR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
R	REMAINDER OR RADIUS
REF.	REFER TO OR REFERENCE
REINF.	REINFORCEMENT/REINFORCE
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
S.A.	STUD ANCHOR
SECT.	SECTION
SCHED.	SCHEDULE
SHT	SHEET
SHR.	SHRINKAGE
SIM.	SIMILAR
SPEC.	SPECIFICATION
STIFF.	STIFFENER
STL	STEEL
SYM.	SYMETRICAL
S.O.G.	SLAB-ON-GRADE
SPA.	SPACING
SS	STAINLESS STEEL
STD	STANDARD
SYP	SOUTHERN YELLOW PINE
TEMP.	TEMPERATURE
TEN.	TENSION
TERM.	TERMINATE
T&B	TOP AND BOTTOM
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.P.	TOP OF PIER
T.O.S.	TOP OF STEEL / TOP OF SLAB
TS	TUBE STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VAR.	VARIES
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT
WP	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

SYMBOL KEY



STRUCTURAL DESIGN

1. STRUCTURAL DESIGN STANDARDS:

   2015 INTERNATIONAL BUILDING CODE
   LOCAL AMENDMENTS TO BUILDING CODE
   ASCE 7-10

2. STRUCTURAL DESIGN LOADS:

   FLOOR LIVE LOAD

GEAR/WORKOUT/SCUBA	100 psf
TRUCK BAY	250 psf
MEZZANINE	50 psf
RESIDENTIAL AREA	40 psf
ROOF LIVE LOAD	20 psf

   SNOW LOAD:

GROUND SNOW LOAD	5 psf
IMPORTANCE FACTOR, Is	1.2

   FLAT ROOF SNOW LOADS:



   WIND LOAD:

WIND SPEED, V_{ult}	120 MPH
IMPORTANCE FACTOR, I_W	1.0
EXPOSURE CATEGORY	C
MWFRS LATERAL LOAD	20 psf
NET C&C ROOF UPLIFT, EDGE	15 psf (EDGE STRIP "a" = 10 ft.)
NET C&C ROOF UPLIFT, FIELD	12 psf
C&C WALL LOAD, EDGE	24 psf (EDGE STRIP "a" = 10 ft.)
C&C WALL LOAD, FIELD	22 psf

   SEISMIC LOAD:

SITE CLASS	C
SEISMIC DESIGN CATEGORY	A
IMPORTANCE FACTOR, I_E	1.5
S_{DS}	0.074
S_{D1}	0.05
BASE SHEAR	40 kips

GENERAL NOTES

1. THE DRAWINGS AND SPECIFICATIONS DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION UNLESS NOTED OTHERWISE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL MEANS AND METHODS MEET THE REQUIREMENTS OF THE LATEST OSHA REGULATIONS.
2. ALL DETAILS AND SECTIONS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
3. RESPONSES TO QUESTIONS AND RFI'S, COMMENTS MADE DURING THE REVIEW OF SUBMITTALS, AND DIRECTIVES PROVIDED IN ANY FORM BY THE ENGINEER TO THE CONTRACTOR DURING THE CONSTRUCTION PROCESS ARE INTENDED TO BE CLARIFICATIONS OF THE CONTRACT DOCUMENTS AND ARE NOT INTENDED TO REPRESENT A CHANGE IN COST OF THE PROJECT TO THE OWNER UNLESS A CHANGE ORDER REQUEST IS PROVIDED WITH DETAILED PRICING INFORMATION TO THE ARCHITECT BEFORE PURCHASING, DETAILING, FABRICATING, OR INSTALLING ANY COMPONENT RELATED TO SUCH CLARIFICATIONS AND CORRECTIONS.
4. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES IF APPLICABLE, INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSEMBLE AND COORDINATE THE REQUIREMENTS OF ALL COMPONENTS OF THE CONTRACT DOCUMENTS AND VERIFY EXISTING CONDITIONS OF THE SITE. SEE ARCHITECTURAL AND ALL OTHER TRADES DOCUMENTS FOR SIZE AND LOCATION OF PIPES, VENTS, CHASES, DUCTS, OPENINGS, DEPRESSIONS, RECESSES, SLOPES, BLOCKOUTS, CURBS, EMBEDMENTS, AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL REPORT ANY DISCREPANCY BETWEEN THESE DOCUMENTS AND THOSE OF THE ARCHITECT AND ALL PROJECT CONSULTANTS OR ANY ERROR, OMISSION OR DIFFICULTY AFFECTING HIS WORK TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.
6. THE DESIGN LOADS LISTED IN THE STRUCTURAL DESIGN CRITERIA SHALL NOT BE EXCEEDED DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION LOADS, MATERIAL STORAGE, TEMPORARY BRACING, SHORING AND FORMWORK AS REQUIRED TO KEEP ALL ELEMENTS OF THE STRUCTURE PLUMB AND IN TRUE ALIGNMENT DURING ALL PHASES OF CONSTRUCTION. DESIGN OF TEMPORARY BRACING AND SHORING SHOULD BE PROPERLY DESIGNED UNDER THE SUPERVISION OF A LICENSED STRUCTURAL ENGINEER. PERMANENT BRACING MEMBERS SHOWN ON STRUCTURAL DRAWINGS ARE REQUIRED FOR THE COMPLETED STRUCTURE AND MAY NOT BE ADEQUATE DURING CONSTRUCTION.
7. INSPECTIONS SHALL BE DONE BY A QUALIFIED, INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER SHOULD BE CONSIDERED A PERIODIC CHECK TO INFORM THE OWNER OF DEFECTS IN THE WORK OF THE CONTRACTOR AND DO NOT CONSTITUTE, OR SUBSTITUTE, INSPECTIONS UNLESS SPECIFICALLY CONTRACTED FOR.
8. STRUCTURAL MEMBERS AND FOUNDATIONS SUPPORTING MECHANICAL EQUIPMENT HAVE BEEN DESIGNED FOR THE WEIGHT OF THE UNITS SHOWN IN THE STRUCTURAL DRAWINGS. ANY CHANGES IN SIZE, WEIGHT, OR QUANTITY OF UNITS SHALL BE REPORTED TO THE ARCHITECT PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS OR RELATED MATERIALS.
9. NOTICE IN WRITING OF ANY PROPOSED SUBSTITUTIONS OR ANY PROPOSED DEVIATIONS TO THE STRUCTURE AS REQUIRED BY THESE DOCUMENTS SHALL BE SUBMITTED WITH A CURRENT ICC REPORT.
10. DIMENSIONS SHOWN IN STRUCTURAL PLANS, SECTIONS, AND DETAILS TAKE PRECEDENT OVER SCALE. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT INDICATED IN THE STRUCTURAL DRAWINGS.
11. THESE PLANS MUST BE SUBMITTED FOR REVIEW BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS; FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
13. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING PRECONSTRUCTION MEETINGS FOR THE FOUNDATION AND SUPERSTRUCTURE ELEMENTS WITH A MINIMUM OF TWO WEEKS OF NOTICE PRIOR TO START OF THE RELEVANT WORK. ATTENDEES SHALL INCLUDE THE CONTRACTORS, APPROPRIATE SUBCONTRACTORS, FABRICATORS, INSPECTORS, ARCHITECT/ENGINEERS. ON THE MEETING AGENDA SHALL BE REVIEW OF WORK SCOPE, PROJECT SCHEDULE OF THE ELEMENT IN QUESTION, CONTACT INFORMATION OF RESPONSIBLE PARTIES, INSPECTION POINTS, REVIEW OF MATERIALS AND ANY SPECIAL DESIGN ISSUES, CLARIFICATIONS TESTING AND ACCEPTANCE, AND ANY OTHER TOPICS DEEMED APPROPRIATE BY THE CONTRACTOR OR THE ARCHITECT.
14. THE ROOF STRUCTURE AND ITS SUPPORTING ELEMENTS HAVE BEEN DESIGNED WITH THE ASSUMPTION THAT SUFFICIENT DRAINAGE HAS BEEN PROVIDED TO PREVENT ANY PONDING OF WATER.

SUBMITTALS

1. SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL COMPONENTS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST CONSTRUCTION DOCUMENTS.
2. CONTRACTOR SHALL ALLOW TWO WEEKS FOR THE ENGINEER'S REVIEW OF EACH SUBMITTAL. SUBMITTALS WHICH DO NOT REFLECT THE CONTRACTOR'S APPROVAL, SIGNATURE AND DATE, OR DO NOT APPEAR TO HAVE BEEN REVIEWED BY THE CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELAYS CAUSED BY REJECTION OF INADEQUATE OR INCORRECT SHOP DRAWINGS.
3. OMISSION FROM THE SHOP DRAWINGS OF ANY REQUIREMENTS AND/OR CORRECTIONS/COMMENTS ON THE SHOP DRAWINGS DURING REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS EVEN IF THE SHOP DRAWINGS HAVE BEEN REVIEWED AND RETURNED. APPROVAL IS FOR GENERAL COMPLIANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS ONLY. APPROVAL ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND CONDITIONS THAT PERTAIN TO FABRICATION AND INSTALLATION OR FOR PROCESSES AND TECHNIQUES OF CONSTRUCTION. APPROVAL OF A SPECIFIC ITEM SHALL NOT INCLUDE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. CALCULATION REVIEW AND COMMENTS DO NOT INFER A DETAILED CHECK OF THE CALCULATIONS.
4. ALL ITEMS DEVIATING FROM THE STRUCTURAL DRAWINGS OR FROM PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.
5. THE USE OF REPRODUCTIONS OR ELECTRONIC FILES OF THE STRUCTURAL DRAWINGS FOR THE PREPARATION OF SHOP DRAWINGS IS NOT ACCEPTABLE WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD. IF SUCH AUTHORIZATION IS OBTAINED, DO NOT SUBMIT SHOP DRAWINGS WITH THE CONTRACT DOCUMENTS TITLE BLOCK AND/OR THE SEAL OF THE REGISTERED ENGINEER OF RECORD AFFIXED. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION OF THE RESPONSIBLE ENGINEER IS AN OFFENSE OF THE ENGINEERING PRACTICING ACT.

GEOTECHNICAL REPORT

1. FOUNDATION DESIGN AND SUBSURFACE INFORMATION IS BASED ON THE RECOMMENDATIONS GIVEN IN THE FOLLOWING GEOTECHNICAL INVESTIGATION REPORT:
   GEOTECHNICAL CONSULTANT: ALPHA TESTING
   REPORT NUMBER: W182356
   REPORT DATE: OCTOBER 22, 2018
   SYSTEM TYPE: ONE-WAY STRUCTURED SLAB AND BEAMS SUPPORTED BY STRAIGHT SHAFT PIERS
   VOID FORM DEPTH: 12" UNDER BEAMS AND SLAB
   MOISTURE RETARDER: 15 mIL, CLASS A
2. THE CONTRACTOR MUST READ THE GEOTECHNICAL INVESTIGATION REPORT AND BE THOROUGHLY FAMILIAR WITH SITE AND SUBGRADE INFORMATION GIVEN THEREIN. ALL SUBGRADE PREPARATION, FILL, FILL PLACEMENT, AND FOUNDATION CONSTRUCTION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE STRUCTURAL DOCUMENTS AND THE GEOTECHNICAL REPORT, AND SHALL BE OBSERVED, TESTED, AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PROCEEDING WITH FOUNDATION CONSTRUCTION.

DRILLED CONCRETE PIERS

1. DRILLED PIER DESIGNS ARE BASED UPON THE INFORMATION LISTED BELOW. REFER TO PLANS AND DETAILS FOR PIER SIZE, REINFORCING, AND PENETRATION INTO BEARING STRATUM.

BEARING MATERIAL:	GRAY SHALE
ALLOWABLE END BEARING PRESSURE:	25 ksf
ALLOWABLE COMPRESSION SKIN FRICTION RESISTANCE:	3.5 ksf
ALLOWABLE UPLIFT SKIN FRICTION RESISTANCE:	2.7 ksf
DEPTH OF SOIL UPLIFT ZONE:	12 feet
DEPTH DISCOUNTED FROM TENSION AND COMPRESSION SKIN FRICTION:	3 feet + CASING
MINIMUM PIER DIAMETER:	18 inches

2. PIER CONSTRUCTION AND CONCRETING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND AS PER THE CURRENT VERSION OF ACI 336. FILL PIER EXCAVATIONS WITH CONCRETE AS SOON AS PRACTICAL, BUT NO LONGER THAN 8 HOURS AFTER THE START OF DRILLING IN THE PENETRATION ZONE. ANY ACCUMULATED WATER SHALL BE PUMPED FROM THE PIER HOLES PRIOR TO CONCRETE PLACEMENT. REFER TO THE GEOTECHNICAL REPORT FOR CASING REQUIREMENTS.
3. PIERS NOT SPECIFICALLY LOCATED ON PLAN SHALL BE LOCATED ON THE CENTERLINE OF THE COLUMN ABOVE. WHERE NO COLUMN OCCURS, LOCATE PIER ON CENTERLINE OF WALL OR BEAM.
4. PIER REINFORCING AND CONCRETE SHALL BE PLACED IMMEDIATELY AFTER DRILLER OPERATIONS ARE COMPLETE. IN NO CASE SHALL A PIER BE DRILLED THAT CANNOT BE POURED BY THE END OF THE WORKDAY. WHERE THE CLEAR DISTANCE BETWEEN TWO PIERS IS LESS THAN THE PIER DIAMETER OF THE LARGER PIER, THE CONTRACTOR SHALL WAIT AT LEAST 48 HOURS AFTER CASTING THE FIRST PIER BEFORE DRILLING THE SECOND PIER.
5. THE CONTRACTOR SHALL VERIFY DEPTH OF PIERS BEFORE PIER STEEL IS CUT. PIER STEEL MAY BE DELIVERED TO THE JOBSITE IN STANDARD LENGTHS AND CUT AS REQUIRED.
6. TOP OF PIER SHALL BE OF THE SPECIFIED DIAMETER. BELLING AT THE TOP OF PIERS IS PROHIBITED. FORM TOP OF PIER IF REQUIRED TO MAINTAIN THE SPECIFIED DIAMETER. ANY CONCRETE EXTENDING BEYOND THE SPECIFIED DIAMETER SHALL BE REMOVED.
7. ALL PIERS SHALL BE INSPECTED BY A REPRESENTATIVE OF A QUALIFIED GEOTECHNICAL LABORATORY IN ORDER TO INSURE THAT THE PROPER BEARING MATERIAL HAS BEEN REACHED IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT.
8. TEMPLATE SHALL BE UTILIZED TO SET DOWELS AND ANCHOR BOLTS IN PIERS. DETAILS OF THE TEMPLATES SHALL BE PROVIDED IN THE PIER SHOP DRAWINGS.
9. CASING SHALL HAVE AN INSIDE DIAMETER EQUAL TO THE PIER DIAMETER SHOWN IN THE PIER SCHEDULE.
10. THE PRICE FOR CASING OF PIERS AND/OR UNDERWATER CONCRETE PLACEMENT OF PIERS SHALL BE INCLUDED WITHIN THE BASE BID. THE CONTRACTOR SHALL PROVIDE A UNIT PRICE (ADD AND DEDUCT) FOR EACH CASING SIZE CALLED OUT ON THE PLANS. PAYMENT FOR CASING SHALL BE BASED UPON THE NET LENGTH OF CASING UTILIZED ON THE PROJECT. THE CONTRACTOR'S BID SCHEDULE SHALL ALSO INCLUDE UNDERWATER CONCRETE PLACEMENT.
11. THE DRILLED SHAFT CONTRACT SHALL CONTAIN PROVISIONS FOR PENETRATION OR REMOVAL OF HARD ROCK AND OBSTRUCTIONS.

ISOLATION OF STRUCTURE FOR EXPANSIVE SOILS

1. EXPANSIVE CLAYS ARE PRESENT AT THIS SITE. THE FOLLOWING PRACTICES SHALL BE FOLLOWED, IN ADDITION TO OTHER MEASURES DESCRIBED IN THE GEOTECHNICAL REPORT, AS A MINIMUM TO PREVENT DAMAGE TO THE STRUCTURE:
   A. GRADE SOIL AROUND BUILDING AWAY FROM THE BUILDING.
   B. EMPLOY APPROPRIATE MEASURES TO PREVENT PONDING OF WATER IN THE BUILDING PAD AREAS. MAINTAIN THE BUILDING PAD AT SPECIFIED MOISTURE CONTENT.
   C. PLACE BACKFILL AROUND THE PERIMETER GRADE BEAMS AND OR BASEMENT WALLS IMMEDIATELY AFTER THEY ARE CAST. ANY STANDING WATER BEFORE BACKFILL PLACEMENT MUST BE PUMPED DRY AND THE UNDERLYING SOIL MUST BE RETESTED TO MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
2. A VOID SHALL BE CONSTRUCTED BELOW ALL STRUCTURAL ELEMENTS SUPPORTED BY PIERS TO SEPARATE THESE ELEMENTS FROM THE SOIL. THE USE OF SIDE RETAINERS IS REQUIRED TO PREVENT SOIL INTRUSION INTO THE VOID AS DESCRIBED IN THE GEOTECHNICAL REPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE VOID SHALL BE AS SHOWN IN THE GEOTECHNICAL REPORT NOTES.

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI STANDARD "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318).
2. MAINTAIN SCHEDULED STRUCTURAL DEPTH OF MEMBERS AS A MINIMUM WHILE FOLLOWING SLOPES AND GRADES SHOWN ON PLANS.
3. ALL CONCRETE THAT WILL BE COLORED OR STAINED MUST BE WET CURED.
4. ALL CONSTRUCTION JOINTS IN BEAMS, JOISTS, SLABS, AND WALLS SHALL BE PROVIDED WITH SHEAR KEYS AS SHOWN IN DETAILS. SUBMIT LOCATIONS OF ALL CONSTRUCTION JOINTS TO ENGINEER FOR REVIEW.
5. HOT WEATHER CONCRETING SHALL CONFORM TO ACI 305 AND COLD WEATHER CONCRETING SHALL CONFORM TO ACI 306.
6. FOUNDATION WALLS (INCLUDING LOADING DOCKS AND ELEVATOR PITS) SHALL HAVE TEMPORARY BRACING BEFORE BACKFILL IS PLACED AGAINST THEM. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED BY FLOOR DIAPHRAGMS (SLAB ON GRADE OR STRUCTURED SLAB) THAT HAVE REACHED AT LEAST 75% OF DESIGN STRENGTH, UNLESS NOTED OTHERWISE.
7. GRADE BEAM DIMENSIONS AND/OR LOCATIONS MAY NOT BE ALTERED WITHOUT APPROVAL OF THE ENGINEER OF RECORD.
8. FOUNDATION PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER.
9. PROVIDE WATERSTOPS AT ALL BELOW GRADE CONSTRUCTION JOINTS IN CONCRETE ELEMENTS WHERE THERE IS EARTH SUBGRADE AT THE JOINT ON ONE SIDE OF THE CONCRETE MEMBER AND INTERIOR SPACE ON THE OTHER, REGARDLESS OF WHETHER THE WATERSTOP IS SPECIFICALLY INDICATED IN THE DETAIL. PROVIDE WATERSTOPS AT OTHER LOCATIONS INDICATED IN THE DOCUMENTS PRIOR TO CONSTRUCTION.
10. NO CONDUIT, SLEEVE, OR PIPE IS PERMITTED TO BE EMBEDDED IN THE CONCRETE WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OR UNLESS SPECIFICALLY DETAILED OTHERWISE. ALL CONDUITS, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL COMPLY WITH THE SPACING AND SIZE REQUIREMENTS OF ACI 318.
11. REFER TO THE GEOTECHNICAL REPORT FOR RISK OF GROUNDWATER PRESENCE AND ITS POTENTIAL IMPACT ON NEW CONSTRUCTION. CONTRACTOR MUST CARRY AN APPROPRIATE ALLOWANCE IN THE BIDS FOR THE MEASURES SUCH AS SITE DEWATERING AND PIER CASINGS, ETC.

CONCRETE MIX

1. ALL CONCRETE SHALL BE LABORATORY DESIGNED AND CONTROLLED AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318). SAND AND COARSE AGGREGATES SHALL MEET THE REQUIREMENTS OF ASTM C-33 OR C-330. PORTLAND CEMENT SHALL BE TYPE I OR II AND SHALL MEET THE REQUIREMENTS OF ASTM C-150. IN ADDITION, CONCRETE SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

USAGE	28-DAY STRENGTH (PSI)	SLUMP (IN.)	MAX. AGG. SIZE (IN.)
PIERS	3,000	4-6	1 1/2"
GRADE BEAMS	4,000	3-5	1"
SLAB OVER VOID	4,000	3-5	3/4"
SLAB OVER DECK	4,000	3-5	3/4"

2. CONCRETE PROPORTIONS SHALL BE ESTABLISHED FROM CONCRETE COMPRESSIVE STRENGTH TEST RECORDS FROM THE FACILITY THAT WILL SUPPLY CONCRETE FOR THIS PROJECT. TEST RECORDS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF ACI 318 AND THE SPECIFICATIONS AND SHALL BE REFLECTIVE OF THE PERIOD OF THE YEAR DURING WHICH THE CONCRETE IS TO BE PLACED. CHANGING MATERIAL PROPORTION, PROPERTIES, SOURCES, COMBINATIONS, ADDITIONS OR ANYTHING WHICH IS A CHANGE IN THE APPROVED MIX DESIGN REQUIRES A NEW MIX DESIGN SUBMITTAL.
3. SLUMP AT THE POINT OF PLACEMENT SHALL NOT EXCEED AMOUNT SPECIFIED. DO NOT PLACE CONCRETE WITH SLUMP AND TEMPERATURE OUTSIDE THE LIMITS PROVIDE ON THE APPROVED MIX DESIGNS. USE OF CHLORIDES IN ANY ADMIXTURE IS NOT PERMITTED. SLUMP RANGE DOES NOT APPLY TO SUPERPLASTICIZED CONCRETE.
4. FLY ASH SHALL NOT BE USED AS A CONSTITUENT IN ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH IS ALLOWED IN ALL OTHER NON-ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH SHALL MEET ASTM C618 CLASS F REQUIREMENTS. THE WEIGHT OF THE FLY ASH SHALL BE ADDED TO THE WEIGHT OF THE CEMENT IN THE CALCULATION OF WATER CEMENT RATIO. THE CONTRACTOR SHALL CONFIRM IN THE MIX DESIGN SUBMITTAL THAT THE USE OF FLY ASH WILL NOT INTERFERE WITH THE PERFORMANCE OF OTHER PRODUCTS AND MATERIALS THAT WILL BE IN CONTACT WITH THE CONCRETE.
5. AIR ENTRAINMENT IN NORMAL WEIGHT CONCRETE IS REQUIRED ONLY IN CONCRETE PERMANENTLY EXPOSED TO WEATHER CONDITIONS. AIR ENTRAINMENT IS REQUIRED FOR ALL EXPOSURE CONDITIONS FOR LIGHTWEIGHT CONCRETE. PERCENT AIR ENTRAINMENT SHALL BE 4.5% PLUS/MINUS 1.5%. DO NOT AIR-ENTRAIN INTERIOR FLOOR SLABS THAT RECEIVE HAND TROWEL FINISH OR POLISHED CONCRETE.
6. NON CHLORIDE ACCELERATING ADMIXTURE MAY BE USED IN CONCRETE SLABS PLACED AT AMBIENT TEMPERATURES BELOW 50 DEGREES FAHRENHEIT AT CONTRACTOR'S OPTION.
7. THE COMPRESSIVE STRENGTH OF GROUT BELOW BASE PLATES SHALL BE AT LEAST 7500 PSI.
8. CONTRACTOR MUST SUBMIT THE MIX DESIGN SUBMITTALS TO THE PROJECTS TESTING LABORATORY PRIOR TO SUBMITTING TO THE ARCHITECT AND/OR STRUCTURAL ENGINEER.

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19.097.00

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

STATE OF TEXAS
SCOTT R. ARMSTRONG
83205
LICENSED
PROFESSIONAL ENGINEER
11/07/2019

MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

STRUCTURAL INFORMATION

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S1.10

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REINFORCING STEEL

1. ALL CONCRETE REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.
2. REINFORCING STEEL THAT REQUIRES WELDING SHALL CONFORM TO ASTM A706, WITH GRADES AS SHOWN ABOVE.
3. ALL REINFORCING BARS SHALL BE LAPPED 40 BAR DIAMETERS (2'-0" MINIMUM) AT SPLICES UNLESS NOTED OTHERWISE ON PLANS OR DETAILS. DEVIATIONS IN SPLICE LOCATIONS AND LENGTHS ARE NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. ALL LAPS IN WELDED WIRE FABRIC SHALL BE ONE MESH PLUS TWO INCHES.
5. CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI 315 AND ACI 318.
6. LAP SPLICES OF CONTINUOUS BEAM REINFORCEMENT SHALL BE MADE AT MIDSPAN FOR TOP BARS AND AT SUPPORTS FOR BOTTOM BARS.
7. PROVIDE CORNER BARS AT INTERSECTIONS OF WALLS, GRADE BEAMS AND STRIP FOOTINGS IN ACCORDANCE WITH THE TYPICAL DETAILS. BARS THAT HOOK AT DISCONTINUOUS ENDS SHALL HAVE THE HOOK PLACED HORIZONTALLY AT EXTERIOR CORNERS IN LIEU OF CORNER BARS.
8. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS NOTED BELOW. REFER TO ACI 318 SECTION 20.6 FOR CONDITIONS NOT NOTED:

CONDITION	PROTECTION
PIERS	3 IN.
SLAB OVER VOID	3/4 IN. TOP 1 1/2 IN. BOTTOM
GRADE BEAMS	2 IN. FORMED SIDES 3 IN. BACKFILLED SIDES
SLAB OVER DECK	MID-SLAB

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE FOLLOWING:

ITEM	ASTM SPECIFICATION
WIDE FLANGE	A992, GRADE 50
TUBE STEEL (HSS)	A500, GRADE B
STEEL PIPE	A53, GRADE B
CHANNEL	A36
ANGLES, PLATES, MISC. STL.	A36

2. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING:

ITEM	ASTM SPECIFICATION
ANCHOR BOLTS	F1554, GRADE 55
CONNECTION BOLTS	A325
EXPANSION ANCHORS	B633
CHEMICAL ANCHORS	F1554, GRADE 36

3. STEEL BEAMS SHALL BE ERECTED WITH NATURAL CAMBER UP.
4. WHERE CAMBER OF STEEL BEAMS IS SPECIFIED ON THE PLANS, CAMBER OF STEEL BEAMS MUST COMPLY WITHIN LIMITS SET BY AISC. SUPPORT CAMBERED STEEL MEMBERS IN A MANNER THAT WILL NOT RESULT IN ANY LOSS OF CAMBER DURING SHIPPING AND HANDLING. THE TESTING LAB SHALL VERIFY THE SPECIFIED BEAM CAMBERS AT THE JOBSITE WITH THE BEAMS LYING FLAT ON THE GROUND (WEBS PARALLEL TO THE GROUND). BEAMS WHOSE CAMBER FALLS OUTSIDE THE TOLERANCE SHALL BE RETURNED TO THE SHOP FOR CORRECTION.
5. STEEL MEMBERS SHALL NOT BE SPLICED EXCEPT WHERE INDICATED ON THE DRAWINGS UNLESS APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
6. BOLTS FOR STEEL BEAM AND COLUMN CONNECTIONS SHALL BE ¾" DIAMETER ASTM A 325-N HIGH-STRENGTH WITH HARDENED WASHERS, UNLESS NOTED OTHERWISE. ALL BOLTED CONNECTIONS ARE BEARING TYPE. ALL BOLTS SHALL BE TIGHTENED SNUG TIGHT, UNLESS NOTED OTHERWISE.
7. THE DESIGN OF THE STRUCTURAL STEEL CONNECTIONS, WHICH ARE NOT FULLY DETAILED IN THESE DRAWINGS, IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE STEEL FABRICATOR. THE DESIGN OF THE CONNECTIONS SHALL BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER WORKING FOR THE FABRICATOR IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE AISC 303 - CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.
8. REFER TO THE SIMPLE SHEAR STEEL BEAM CONNECTION DETAIL FOR ADDITIONAL CONNECTION REQUIREMENTS AND INFORMATION.
9. UNLESS NOTED OTHERWISE, ALL MOMENT CONNECTIONS SHALL BE MADE WITH FULL PENETRATION WELDS AND SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE MEMBER.
10. PROVIDE DOUBLE NUTS AND DOUBLE WASHERS FOR STEEL COLUMN ANCHOR BOLTS TO ALLOW FOR ADJUSTMENT IN BASE PLATE ELEVATION. PROVIDE HIGH STRENGTH, NON SHRINK, NON METALLIC GROUT BELOW BASE PLATES.
11. ALL STRUCTURAL STEEL, EXCEPT EMBEDDED ITEMS, SHALL BE PAINTED WITH ONE SHOP COAT OF RUST INHIBITIVE PAINT. DO NOT PAINT TOP FLANGE OF COMPOSITE STEEL BEAMS OR SURFACE OF COLUMNS TO WHICH SHEAR STUD CONNECTORS WILL BE WELDED.
12. ALL STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED G-90 COATING. COOLING TOWER GRILLAGE SHALL BE GALVANIZED WITH G-135 COATING. ANY DAMAGE TO THE GALVANIC MATERIAL DURING WELDING SHALL BE TOUCHED UP WITH GALVANIZING REPAIR PAINT. HIGH-ZINC-DUST-CONTENT PAINT FOR REGALVANIZING WELDS AND REPAIR PAINTING GALVANIZED STEEL WITH DRY FILM CONSTRAINING NOT LESS THAN 93 PERCENT ZINC DUST BY WEIGHT, AND COMPLYING WITH DOD-P-21035A OR SSPC-PAINT 20.
13. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS): WHERE NOTED ON PLANS OR BY THE ARCHITECT SHALL CONFORM TO AISC 303, SECTION 10.
14. LEDGER ANGLE FOR FASCIA BRICK SUPPORT SHALL BE INSTALLED SUCH THAT THE SWEEP OR CAMBER DOES NOT EXCEED 1/8 INCH DEVIATION FROM STRAIGHT LINE.

WELDING

1. WELDED CONSTRUCTION SHALL CONFORM TO THE FOLLOWING AMERICAN WELDING SOCIETY STANDARDS:

ITEM	SPECIFICATION
STRUCTURAL STEEL	AWS D1.1
METAL DECK	AWS D1.3
REINFORCING STEEL	AWS D1.4

2. ELECTRODES FOR FIELD AND SHOP WELDS SHALL BE E70XX, U.N.O.
3. ELECTRODES FOR WELDING OF REINFORCING STEEL SHALL BE E80XX.
4. ELECTRODES FOR WELDING OF METAL DECK SHALL CONFORM TO AWS D1.3.
5. WHEN WELDS ARE NOT CALLED OUT ON THE DRAWINGS, THEY ARE MINIMUM SIZE FILLET WELDS PER AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH ARE CONTINUOUS.
6. ALL GROOVE WELDS ARE FULL PENETRATION UNLESS NOTED OTHERWISE.

METAL ROOF DECKING

1. REFER TO DRAWINGS FOR DECK TYPES, THICKNESS AND ATTACHMENT PATTERNS.
2. ALL STEEL DECK SHALL COMPLY WITH STEEL DECK INSTITUTE (SDI) SPECIFICATIONS.
3. THE METAL ROOF DECK IS REQUIRED TO ACT AS A DIAPHRAGM. REFER TO THE ROOF DIAPHRAGM FASTENER DIAGRAM AND SCHEDULE FOR REQUIRED ATTACHMENT PATTERN.
4. ALL METAL ROOF DECKING SHALL BE GALVANIZED WITH G60 COATING CONFORMING TO ASTM 924.
5. COORDINATE METAL DECK LENGTH WITH THE FINAL JOIST AND BEAM LAYOUT. THE FINAL JOIST AND BEAM LAYOUT CAN BE DIFFERENT THAN THAT SHOWN IN THE CONTRACT DRAWINGS DEPENDING ON WHETHER THE JOIST BEARING SEATS ARE BUTTED OR LAPPED. THE JOIST LOCATIONS SHOWN IN THE CONTRACT DRAWINGS DO NOT ACCOUNT FOR THE SMALL DIFFERENCE IN JOIST LOCATION DUE TO THE VARIOUS JOIST BEARING CONDITIONS THAT COULD EXIST IN THE FIELD.
6. SHEET STEEL FOR DECK AND ACCESSORIES SHALL CONFORM TO ASTM A653-94 STRUCTURAL QUALITY WITH A YIELD STRENGTH OF 33 KSI.
7. STEEL DECK ATTACHMENTS INDICATED IN THE DRAWINGS ARE THE MINIMUM REQUIRED FOR DIAPHRAGM DESIGN. ROOF DECK SUPPLIER SHALL COORDINATE WITH THE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS SUCH AS FACTORY MUTUAL (FM) OR UNDERWRITERS LABORATORY (UL) REQUIREMENTS.
8. THE METAL ROOF DECK IS DESIGNED TO BE CONTINUOUS OVER THREE OR MORE SPANS. THE METAL DECK SUPPLIER SHALL ADJUST THE THICKNESS OR GAUGE OF THE DECK AT LOCATIONS WHERE SINGLE OR DOUBLE SPAN CONDITIONS ARE PROVIDED. DECK SHALL BE DESIGNED TO PROVIDE EQUIVALENT OR GREATER LOAD CAPACITY AS THE SPECIFIED DECK SUPPORTED OVER THREE CONTINUOUS SPANS.
9. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE ROOF DECK.

CONCRETE MASONRY UNITS

1. THE MASONRY DESIGN HAS BEEN BASED ON A PRISM STRENGTH, fm = 1,500 psi.
2. HOLLOW CONCRETE MASONRY UNITS SHALL MEET ASTM C90, NORMAL WEIGHT, TYPE N1, MINIMUM COMPRESSIVE STRENGTH OF 2,000 psi ON THE NET AREA OF THE BLOCK.
3. CMU MORTAR SHALL MEET ASTM C270 AND SHALL HAVE A COMPRESSIVE CUBE STRENGTH OF 1,800 psi AT 28 DAYS. PROVIDE TYPE N MORTAR FOR INTERIOR PARTITIONS ONLY, TYPE S FOR ABOVE-GRADE EXTERIOR WALLS AND TYPE M FOR BELOW GRADE WALLS.
4. CMU GROUT SHALL MEET ASTM C476 AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 psi AT 28 DAYS. AGGREGATE SIZE SHALL NOT EXCEED 1/2 INCH.
5. HORIZONTAL JOINT REINFORCEMENT SHALL CONFORM TO ASTM A82.
6. REINFORCE CMU WALLS AND PROVIDE FOUNDATION DOWELS PER DETAILS. LAP VERTICAL BARS WITH CLASS A SPLICES UNLESS NOTED OTHERWISE. LAP HORIZONTAL JOINT REINFORCEMENT MIN. 12 INCHES AND PROVIDE CORNER AND TEE PIECES.
7. PLACE REINFORCEMENT PRIOR TO GROUTING, AND SECURE VERTICAL REINFORCEMENT WITH POSITIONERS.
8. GROUT VERTICAL CELLS, BOND BEAMS AND LINTELS AS DETAILED.
9. LOCATE VERTICAL CONTROL JOINTS IN CMU WALLS AT MAX. 20 ft. ON CENTER (COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR LOCATIONS). DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AND BOND BEAM REINFORCEMENT AT CONTROL JOINTS.

LIGHT GAUGE STEEL FRAMING

1. LIGHT GAUGE METAL STUDS AND TRACKS SHALL BE FORMED FROM STRUCTURAL STEEL MEETING THE REQUIREMENTS OF ASTM A1003, GRADE 33, WITH G-60 ZINC COATING AND SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C955.
2. PROVIDE MANUFACTURER'S STANDARD VERTICAL DEFLECTION CLIPS AT NON-LOAD BEARING WALLS, CAPABLE OF ISOLATING THE WALL FRAMING FROM A MAX. 1 INCH VERTICAL UPWARD OR DOWNWARD MOVEMENT OF THE PRIMARY STRUCTURE.
3. REFER TO ARCHITECTURAL DRAWINGS FOR WALL FRAMING DEPTHS. LIGHT GAUGE WALL FRAMING SHALL MEET THE PERFORMANCE REQUIREMENTS BELOW:

CONDITION	WIND LOAD	DEFLECTION LIMIT
EXTERIOR NON-LOAD BEARING	PER ASCE 7-05	SPAN/600
INTERIOR NON-LOAD BEARING	5 PSF	SPAN/240

4. LIGHT GAUGE SUPPLIER SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS INDICATING THE LOCATIONS OF STUDS, TRACKS, BRIDGING, DIAGONAL BRACING, STRAPPING, CLIPS, CLOSURES AND CONNECTORS. SHOP DRAWINGS SHALL INCLUDE CALCULATIONS INDICATING CONFORMANCE TO ALL REQUIREMENTS OF THE BUILDING CODE AND THE ARCHITECTURAL AND STRUCTURAL DRAWINGS, AND SHALL INCLUDE THE SEAL AND SIGNATURE OF A REGISTERED ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.
5. THE MINIMUM EXTERIOR STUD GAUGES AND SPACINGS SHOWN ON PLAN SHALL BE PROVIDED UNLESS THE LIGHT-GAUGE SUPPLIERS ENGINEERED SUBMITTAL INCLUDED CALCULATIONS INDICATING THAT OTHER GAUGES AND SPACINGS MEET THE PERFORMANCE REQUIREMENTS NOTED ABOVE:

SHELTER INFORMATION

1. TYPE OF SHELTER:

   COMMUNITY TORNADO SHELTER
2. STRUCTURAL DESIGN LOADS:

   ROOF LIVE LOAD 100 psf
3. THE WIND DESIGN CONFORMS TO THE PROVISIONS OF THE ICC 500-2014 ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS.
4. WIND LOAD:

WIND SPEED, V_{SS}	250 MPH
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT, GC_{Pi}	0.55
TOPOGRAPHIC FACTOR, K_{ZT}	1.0
DIRECTIONALITY FACTOR, K_D	1.0

5. FLOOD ZONE:
   THE SHELTER HAS NOT BEEN CONSTRUCTED WITHIN AN AREA SUSCEPTIBLE TO FLOODING.
6. DEBRIS IMPACT REPORTS:
   a) "DEBRIS IMPACT TESTING AT TEXAS TECH UNIVERSITY" REPORT PREPARED BY THE WIND SCIENCE AND ENGINEERING RESEARCH CENTER AT TEXAS TECH UNIVERSITY DATED JUNE 2003.

QUALITY ASSURANCE PLAN

1. TESTING, INSPECTION AND OBSERVATION
   A. MAIN WINDFORCE-RESISTING SYSTEMS AND WIND-RESISTING COMPONENTS INCLUDE:
      i. DECK ATTACHMENT SCREWS AS IDENTIFIED ON PLAN
      ii. HEADED SHEAR STUDS AS IDENTIFIED ON PLAN
      iii. CONCRETE FILLED METAL DECK AS IDENTIFIED ON PLAN
      iv. DRAG STRUTS AS IDENTIFIED ON PLAN
      v. EDGE ANGLES
      vi. WALL PANELS
      vii. FOUNDATIONS

   B. IN ADDITION TO THE SPECIAL INSPECTIONS ON S0.00 SPECIAL INSPECTIONS SHALL BE PROVIDED FOR THE FOLLOWING:
      i. SPECIAL INSPECTION OF FABRICATOR SHOP SHALL BE PROVIDED WHERE FABRICATION OF STRUCTURAL LOAD-BEARING AND DEBRIS-IMPACT-RESISTANT COMPONENTS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATORS SHOP. SPECIAL INSPECTION ARE NOT REQUIRED FOR PREFABRICATED OR PANELIZED STORM SHELTER COMPONENTS THAT HAVE BEEN INSPECTED AND LABELED BY AN APPROVED AGENCY MEETING THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.
      ii. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ANCHORS POST-INSTALLED IN HARDENED CONCRETE AND MASONRY WHEN USED FOR ANCHORAGE OF SHELTER COMPONENTS FORMING A PART OF THE SHELTER ENCLOSURE OR FOR ANCHORAGE OF THE SHELTER STRUCTURE TO FOUNDATIONS. CAPACITIES OF ANCHORS SHALL MEET OR EXCEED THOSE SPECIFIED BY THE CONSTRUCTION DOCUMENTS.

   C. THE BUILDING OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO CONDUCT VISUAL OBSERVATIONS OF THE CONSTRUCTION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION SHALL BE PERFORMED IN ADDITON TO INSPECTION AND TESTING REFERENCED IN THE CONSTRUCTION DOCUMENTS. STRUCTURAL OBSERVATION SHOULD OCCUR AT THE FOLLOWING CONSTRUCTION STAGES:
      i. AFTER PANEL CONNECTIONS HAVE BEEN MADE, BUT PRIOR TO THEM BEING CONCEALED
      ii. PRIOR TO PLACING CONCRETE IN THE FIRST TILT WALL PANEL AND AT THE DESIGN PROFESSIONAL'S DISCRETION THEREAFTER
      iii. AFTER THE STRUCTURAL STEEL HAS BEEN INSTALLED PRIOR TO CEILING INSTALLATION
      iv. AFTER THE STEEL DECK AND CONCRETE REINFORCEMENT FOR THE ROOF DECK HAVE BEEN INSTALLED, BUT PRIOR TO CONCRETE PLACEMENT

      AFTER EACH OBSERVATION, THE REGISTERED DESIGN PROFESSIONAL SHALL REPORT DEFICIENCIES IN WRITING TO THE OWNER AND THE AUTHORITY HAVING JURISDICTION. AT THE CONCLUSION OF WORK, THE REGISTERED DESIGN PROFESSIONAL WHO MADE THE STRUCTURAL OBSERVATIONS SHALL SUBMIT TO THE AUTHORITY HAVING JURISDICTION A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND SHALL IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

2. CONTRACTOR RESPONSIBILITY
   A. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION, FABRICATION, OR INSTALLATION OF A MAIN WINDFORCE-RESISTING SYSTEM OR ANY COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY PRIOR TO THE COMMENCEMENT OF WORK. THE STATEMENT OF RESPONSIBILITY SHALL BE SUBMITTED TO THE FOLLOWING:

      i. THE AUTHORITY HAVING JURISDICTION
      ii. THE RESPONSIBLE DESIGN PROFESSIONAL
      iii. THE OWNER

      THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

      i. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
      ii. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXCERCISED TO OBTAIN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
      iii. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS.
      iv. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANZATION.

   B. A CONTRACTOR STATEMENT OF RESPONSIBILITY IS NOT REQUIRED FOR THE FABRICATION OF STORM SHELTER COMPONENTS THAT HAVE BEEN INSPECTED AND LABELED BY AN APPROVED AGENCY AS MEETING THE REQUIREMENTS OF THE REFERENCED BUILDING CODE AND THE REFERENCED ICC-500 STANDARD.

SPECIAL INSPECTIONS & TESTING

SPECIAL INSPECTIONS ARE REQUIRED TO BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OR TABLES FROM THE 2015 INTERNATIONAL BUILDING CODE:

IBC Section	SPECIAL INSPECTIONS	APPLICABLE	NON-APPLICABLE	QUALIFICATIONS OF SPECIAL INSPECTOR & FREQUENCY OF INSPECTION
1704.2.5	INSPECTION OF FABRICATORS (STRUCTURAL STEEL, LIGHT GA. TRUSS)	X		Fabricator to provide documentation of certification per 1704.2.5.1
1705.2	STEEL CONSTRUCTION	X		City - approved agency; Inspect per IBC 1705.2.1 through 1705.2.4; ref AISC 360, chapter M
1705.3	CONCRETE CONSTRUCTION	X		City - approved agency; continuous for placement, sampling, and prestressing; periodic for all other per table 1705.3
1705.4	CMU MASONRY CONSTRUCTION		X	City - approved agency; continuous for grout, reinforcement, anchors, and specimens; periodic for all other per ACI 530 Section 1.19.3- Level C
1705.5	WOOD CONSTRUCTION		X	City - approved agency; inspect high-load diaphragms & long-span plated trusses per IBC 1705.5.1 & 1705.5.2
1705.6	SOILS	X		City - approved agency; continuous during fill placement; periodic for all other, per table 1705.6
1705.7	DRIVEN DEEP (PILE) FOUNDATIONS		X	City - approved agency; continuous, per table 1705.7
1705.8	CAST-IN-PLACE (PIER) FOUNDATIONS	X		City - approved agency; continuous, per table 1705.8
1705.11	SPECIAL INSPECTIONS FOR WIND RESISTANCE	X		City - approved agency; Inspect per IBC 1705.11.1 through 1705.11.3
1705.12	SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE		X	City - approved agency; Inspect per IBC 1705.12.1 through 1705.12.9
1705.1.1	SPECIAL CASES (UNUSUAL IN NATURE)	X		Inspection of void forms & below-slab moisture retarder installation to verify conformance to mfr's specifications; Inspection of post-installed conc. anchors to verify conformance to mfr's installation procedures.

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No.	Description	Date
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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

SCOTT R. ARMSTRONG 83205 LICENSED PROFESSIONAL ENGINEER
11/07/2019

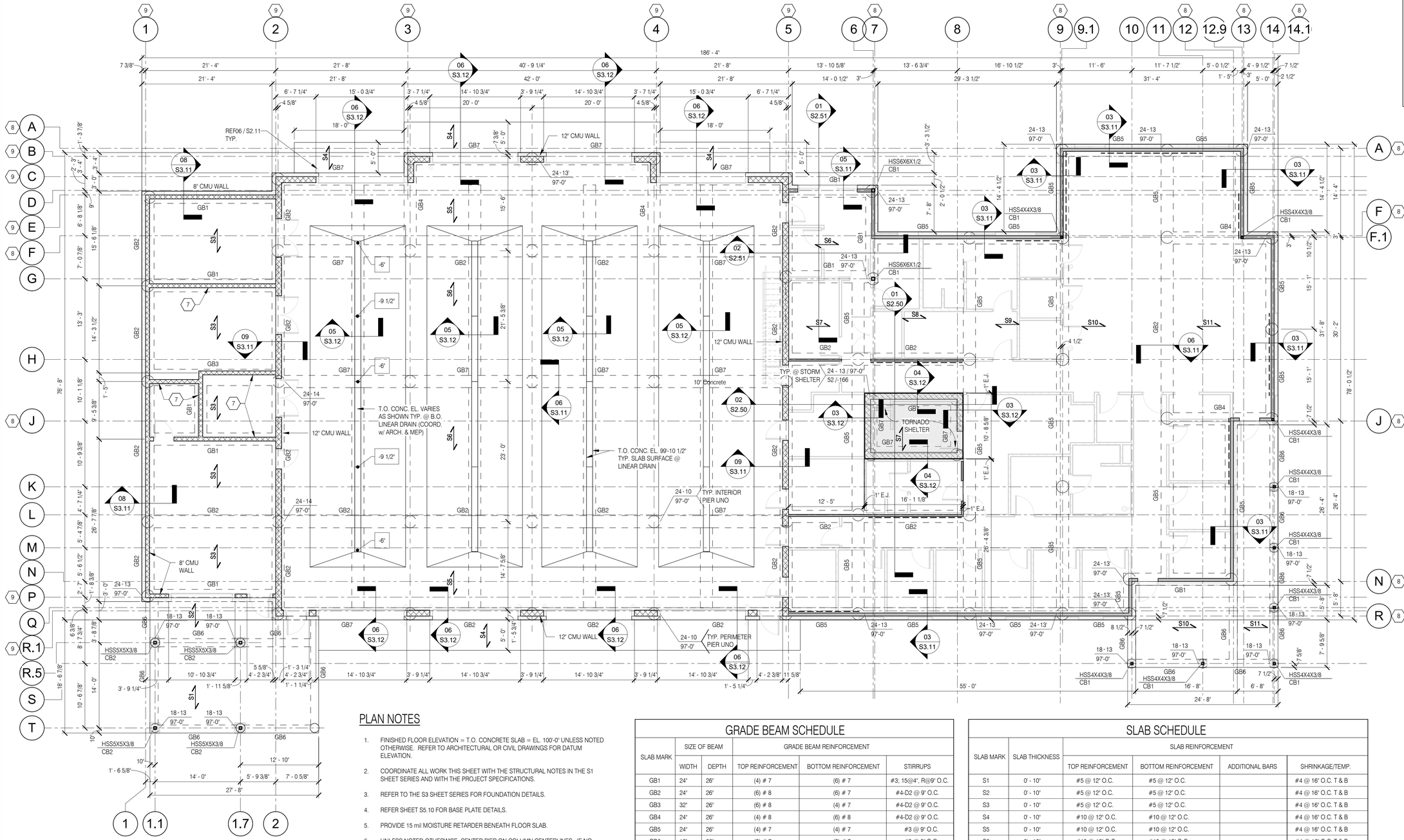
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

STRUCTURAL INFORMATION

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S1.11

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PLAN NOTES

1. FINISHED FLOOR ELEVATION = T.O. CONCRETE SLAB = EL. 100'-0" UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS FOR DATUM ELEVATION.
2. COORDINATE ALL WORK THIS SHEET WITH THE STRUCTURAL NOTES IN THE S1 SHEET SERIES AND WITH THE PROJECT SPECIFICATIONS.
3. REFER TO THE S3 SHEET SERIES FOR FOUNDATION DETAILS.
4. REFER SHEET S5.10 FOR BASE PLATE DETAILS.
5. PROVIDE 15 mil MOISTURE RETARDER BENEATH FLOOR SLAB.
6. UNLESS NOTED OTHERWISE, CENTER PIER ON COLUMN CENTERLINES. IF NO COLUMN IS PRESENT, CENTER PIER ON THE GRADE BEAM.

(7) 8" INTERIOR CMU WALL. T.O. WALL EL. = 112'-8".

(8) GRID LINE IS FACE OF STUD.

(9) GRID LINE IS FACE OF CMU.

GRADE BEAM SCHEDULE

SLAB MARK	SIZE OF BEAM		GRADE BEAM REINFORCEMENT		
	WIDTH	DEPTH	TOP REINFORCEMENT	BOTTOM REINFORCEMENT	STIRRUPS
GB1	24"	26"	(4) # 7	(6) # 7	#3; 15@4", R@9" O.C.
GB2	24"	26"	(6) # 8	(6) # 7	#4-D2 @ 9" O.C.
GB3	32"	26"	(6) # 8	(4) # 7	#4-D2 @ 9" O.C.
GB4	24"	26"	(4) # 8	(6) # 8	#4-D2 @ 9" O.C.
GB5	24"	26"	(4) # 7	(4) # 7	#3 @ 9" O.C.
GB6	16"	26"	(3) # 7	(3) # 7	#3 @ 9" O.C.
GB7	24"	26"	(6) # 9	(6) # 9	#4-D2 @ 9" O.C.

SLAB SCHEDULE

SLAB MARK	SLAB THICKNESS	SLAB REINFORCEMENT			
		TOP REINFORCEMENT	BOTTOM REINFORCEMENT	ADDITIONAL BARS	SHRINKAGE/TEMP.
S1	0' - 10"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. T & B
S2	0' - 10"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. T & B
S3	0' - 10"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. T & B
S4	0' - 10"	#10 @ 12" O.C.	#10 @ 12" O.C.		#4 @ 16" O.C. T & B
S5	0' - 10"	#10 @ 12" O.C.	#10 @ 12" O.C.		#4 @ 16" O.C. T & B
S6	0' - 10"	#10 @ 12" O.C.	#10 @ 12" O.C.		#4 @ 16" O.C. T & B
S7	0' - 6"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. TOP
S8	0' - 6"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. TOP
S9	0' - 6"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. TOP
S10	0' - 6"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. TOP
S11	0' - 6"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. TOP
S12	0' - 8"	#5 @ 12" O.C.	#5 @ 12" O.C.		#4 @ 16" O.C. T & B

NOTE: REFER TO DETAIL 04/S3.11 FOR TYPICAL REINFORCEMENT DETAIL.

01 FOUNDATION PLAN — 1/8" = 1'-0"

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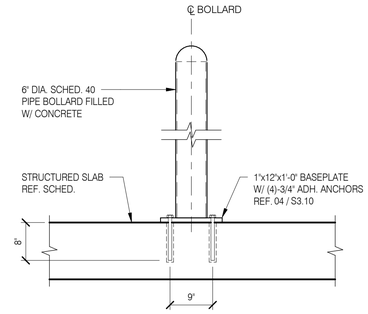
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FOUNDATION PLAN

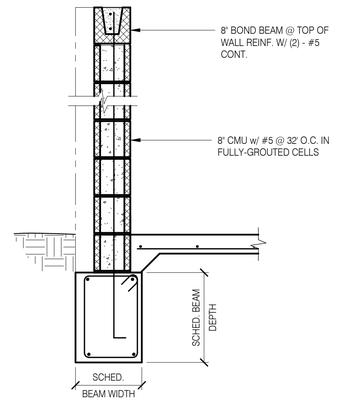
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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S2.10

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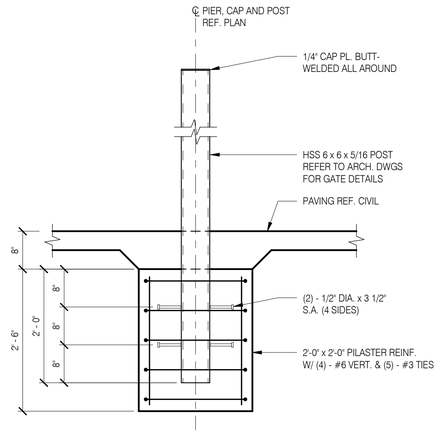
NOTES:
1. REF. ARCH. FOR FINISH OF BOLLARD AND PLATE.
2. ADHESIVE ANCHORS TO BE HOT-DIPPED GALVANIZED.



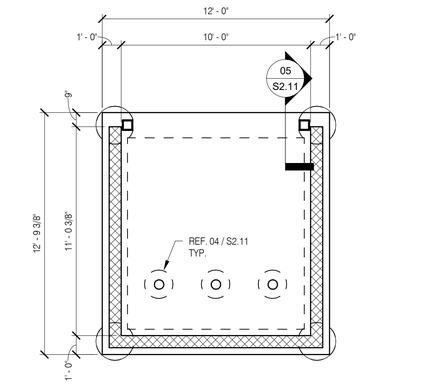
06 BOLLARD DETAIL @ STRUCT. SLAB 3/4" = 1'-0"



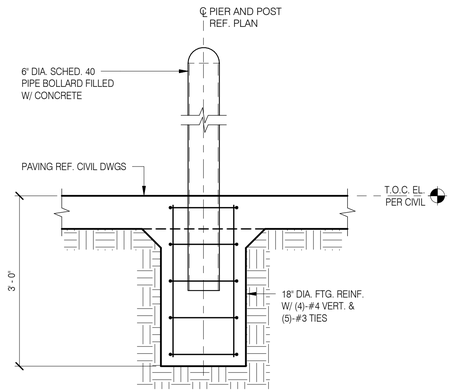
03 SECTION AT CMU ENCLOSURE 3/4" = 1'-0"



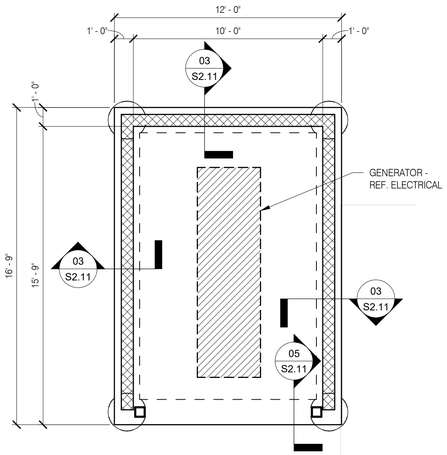
05 GATE POST DETAIL 3/4" = 1'-0"



DUMPSTER ENCLOSURE FOUNDATION PLAN 1/4" = 1'-0"



04 SITE BOLLARD DETAIL 3/4" = 1'-0"



01 GENSET FOUNDATION PLAN 1/4" = 1'-0"

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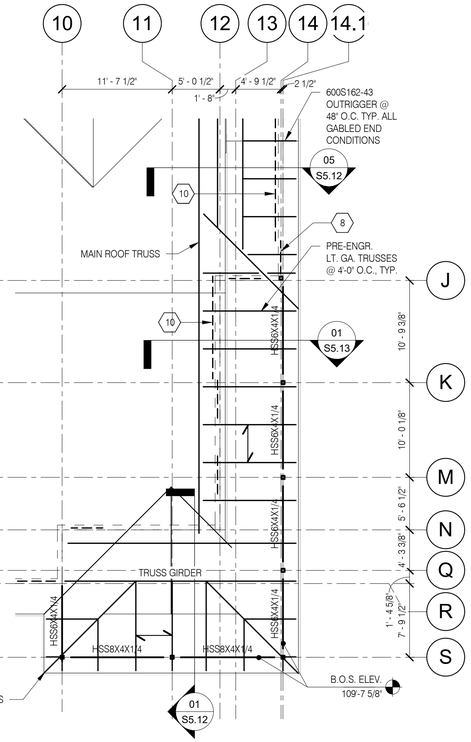
MANSFIELD FIRE STATION NO. 5

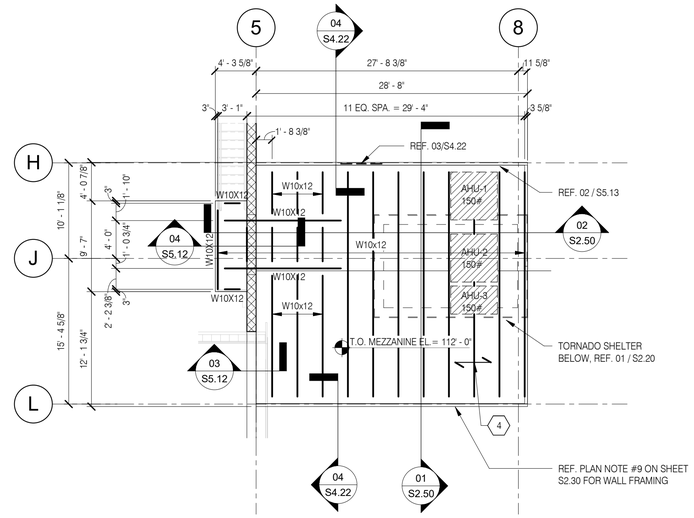
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MANSFIELD, TEXAS 76063

SITE PLANS AND DETAILS

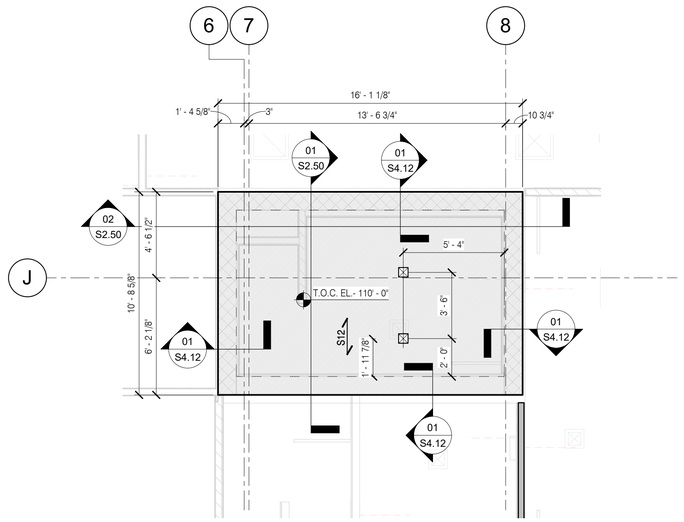
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S2.11

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02 MEZZANINE FRAMING PLAN — 1/8" = 1'-0"



01 TORNADO SHELTER ROOF FRAMING PLAN — 1/4" = 1'-0"

03 EAST CANOPY ROOF FRAMING PLAN — 1/8" = 1'-0"

PLAN NOTES AND KEY

1. T.O. CONCRETE ELEVATIONS REF. PLAN.
   REFER TO ARCHITECTURAL OR CIVIL DRAWINGS FOR DATUM ELEVATION.
2. COORDINATE ALL WORK THIS SHEET WITH THE STRUCTURAL NOTES ON SHEET S1 SERIES WITH THE PROJECT SPECIFICATIONS.
3. REFER TO SHEET S5 SERIES FOR FRAMING DETAILS.

4 NON-COMPOSITE DECK: SEE SHEET S5.10 FOR TYPICAL COMPOSITE DETAILS & STUD PLACEMENT INFORMATION.

DECK:

CONCRETE THICKNESS:	2" LW CONCRETE
DECK TYPE:	1", 24 GA. NON-COMPOSITE DECK (GALV.)
TOTAL THICKNESS:	3"
REINFORCING:	6x6W2.9xW2.9 WWF SUPPORTED @ MID-SLAB.

ATTACH STEEL TO SUPPORTS w/ THE FOLLOWING:

FASTENERS:	HILTI X-ENP-19-L-15 PAF
FASTENER PATTERN:	36/4
SIDELAP:	HILTI SLC SIDELAP SCREWS @ 12" O.C.

armstrong-douglass structural engineers
1601 Bryan St.
Suite 202
Dallas, Texas 75201
214.237.7022
Registration No. F-5635
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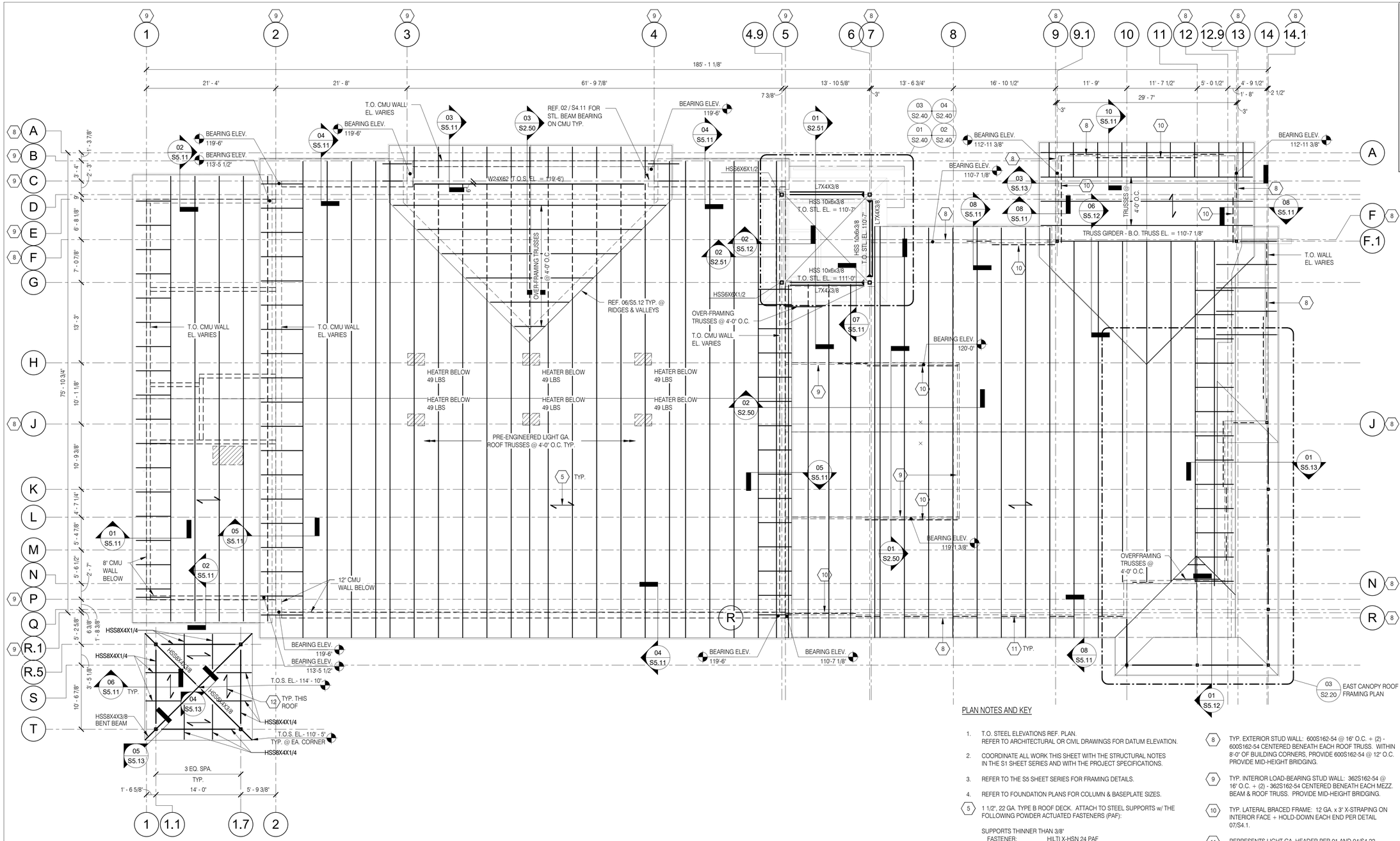
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
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MEZZANINE FRAMING PLAN

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S2.20

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PLAN NOTES AND KEY

1. T.O. STEEL ELEVATIONS REF. PLAN. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS FOR DATUM ELEVATION.
2. COORDINATE ALL WORK THIS SHEET WITH THE STRUCTURAL NOTES IN THE S1 SHEET SERIES AND WITH THE PROJECT SPECIFICATIONS.
3. REFER TO THE S5 SHEET SERIES FOR FRAMING DETAILS.
4. REFER TO FOUNDATION PLANS FOR COLUMN & BASEPLATE SIZES.
5. 1 1/2", 22 GA. TYPE B ROOF DECK. ATTACH TO STEEL SUPPORTS w/ THE FOLLOWING POWDER ACTUATED FASTENERS (PAF):

   SUPPORTS THINNER THAN 3/8"
   - FASTENER: HILTI X-HSN 24 PAF
   - FASTENER PATTERN: 36/4
   - SIDELAP: HILTI SLC SIDELAP SCREWS @ 12" O.C.

   SUPPORTS 3/8" THICK OR THICKER
   - FASTENER: HILTI X-ENP-19-L-15 PAF
   - FASTENER PATTERN: 36/4
   - SIDELAP: HILTI SLC SIDELAP SCREWS @ 12" O.C.

6. TRUSS BRIDGING PER TRUSS SUPPLIER IS NOT SHOWN FOR CLARITY.
7. LIGHT GA. TRUSS SUPPLIER TO COORDINATE TRUSS PROFILES WITH ARCHITECTURAL PLANS AND SECTIONS.
8. TYP. EXTERIOR STUD WALL: 600S162-54 @ 16" O.C. + (2) - 600S162-54 CENTERED BENEATH EACH ROOF TRUSS. WITHIN 8'-0" OF BUILDING CORNERS, PROVIDE 600S162-54 @ 12" O.C. PROVIDE MID-HEIGHT BRIDGING.
9. TYP. INTERIOR LOAD-BEARING STUD WALL: 362S162-54 @ 16" O.C. + (2) - 362S162-54 CENTERED BENEATH EACH MEZZ. BEAM & ROOF TRUSS. PROVIDE MID-HEIGHT BRIDGING.
10. TYP. LATERAL BRACED FRAME: 12 GA. x 3" X-STRAPING ON INTERIOR FACE + HOLD-DOWN EACH END PER DETAIL 07/S4.1.
11. REPRESENTS LIGHT GA. HEADER PER 01 AND 04/S4.22
12. 1 1/2", 20 GA. TYPE BP CELLULAR ROOF DECK. ATTACH TO STEEL SUPPORTS PER NOTES IN NOTE #5.

01 ROOF FRAMING PLAN — 1/8" = 1'-0"

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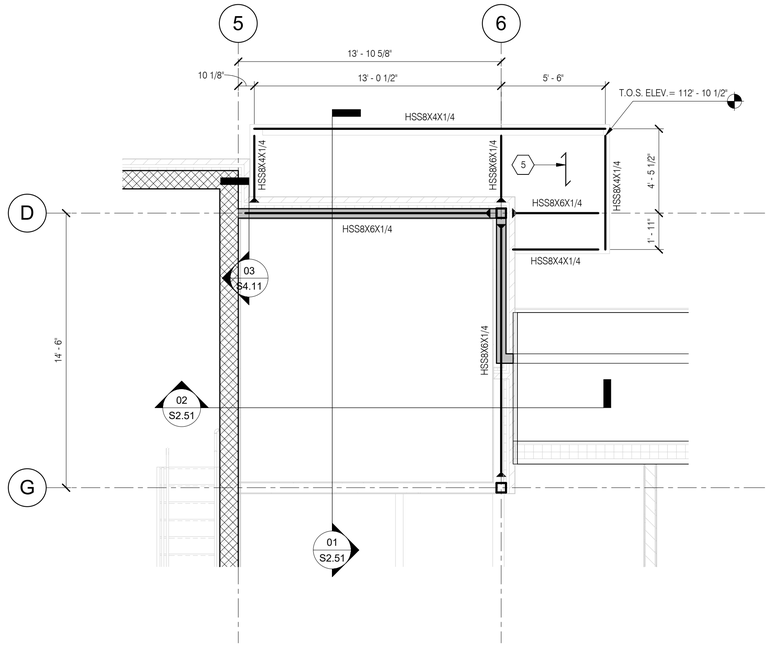
MANSFIELD FIRE STATION NO. 5

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MANSFIELD, TEXAS 76063

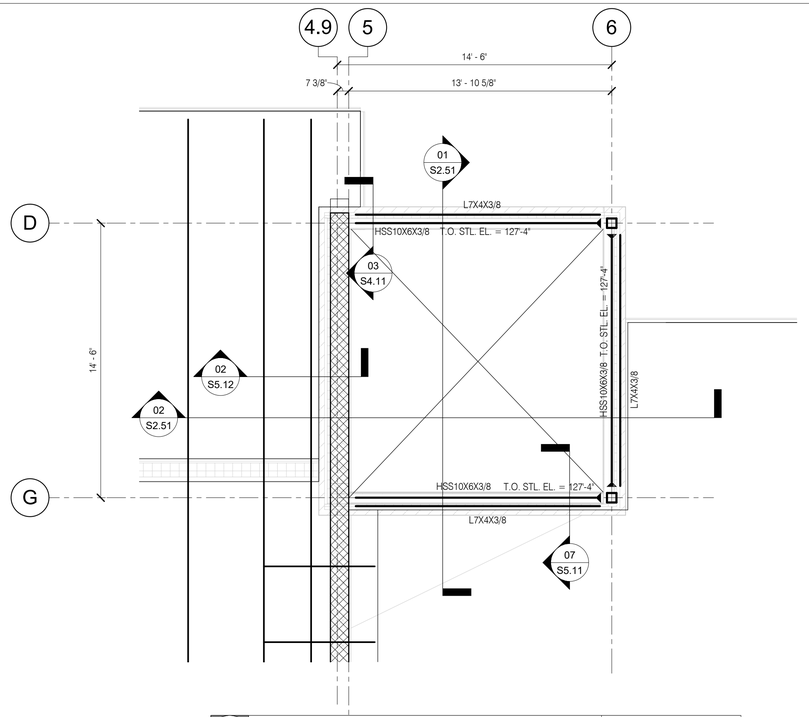
ROOF FRAMING PLAN

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DATE:	11/07/2019
SHEET:	S2.30

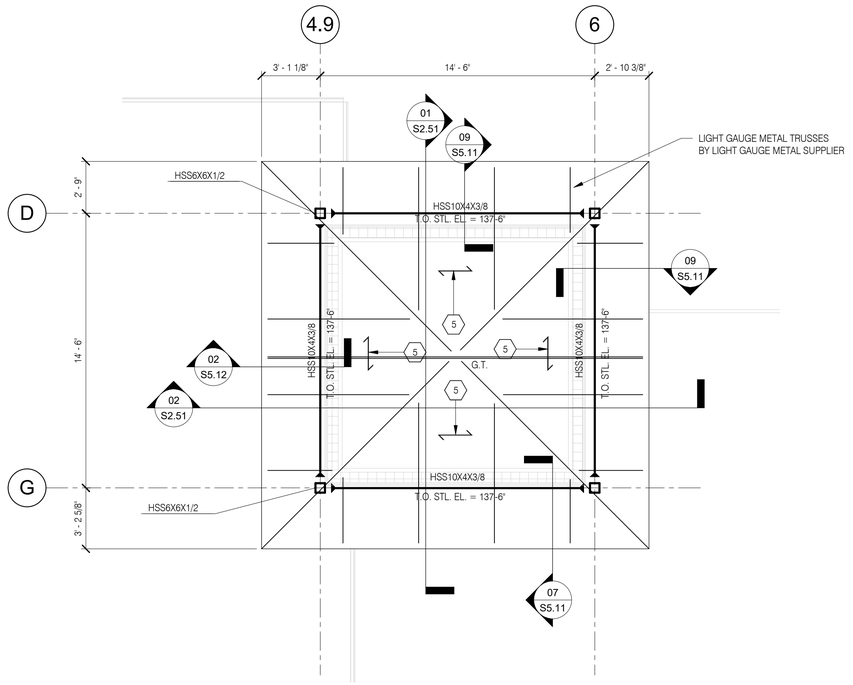
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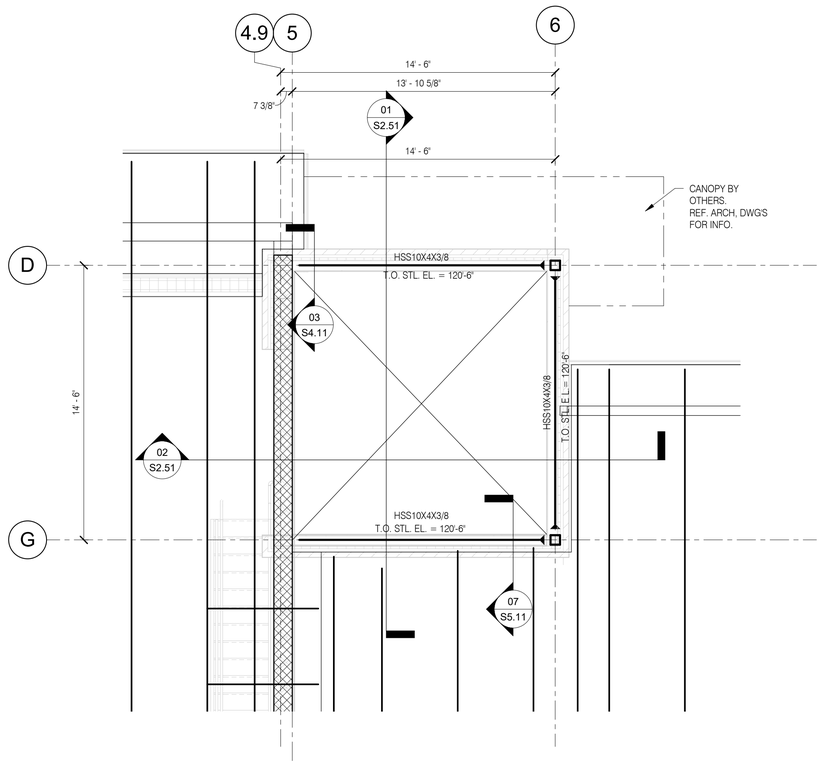
04 ENTRY CANOPY FRAMING PLAN | 1/4" = 1'-0"



02 3RD TIER TOWER FRAMING | 1/4" = 1'-0"



03 HIGH ROOF TOWER PLAN | 1/4" = 1'-0"



01 2ND TIER TOWER FRAMING | 1/4" = 1'-0"

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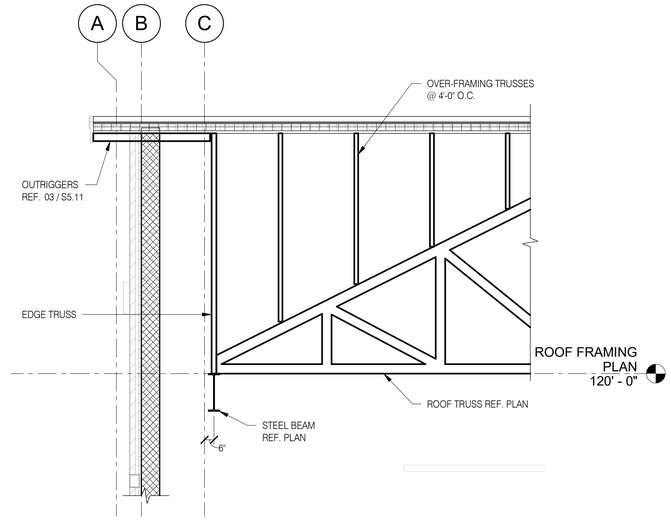
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TOWER FRAMING PLANS

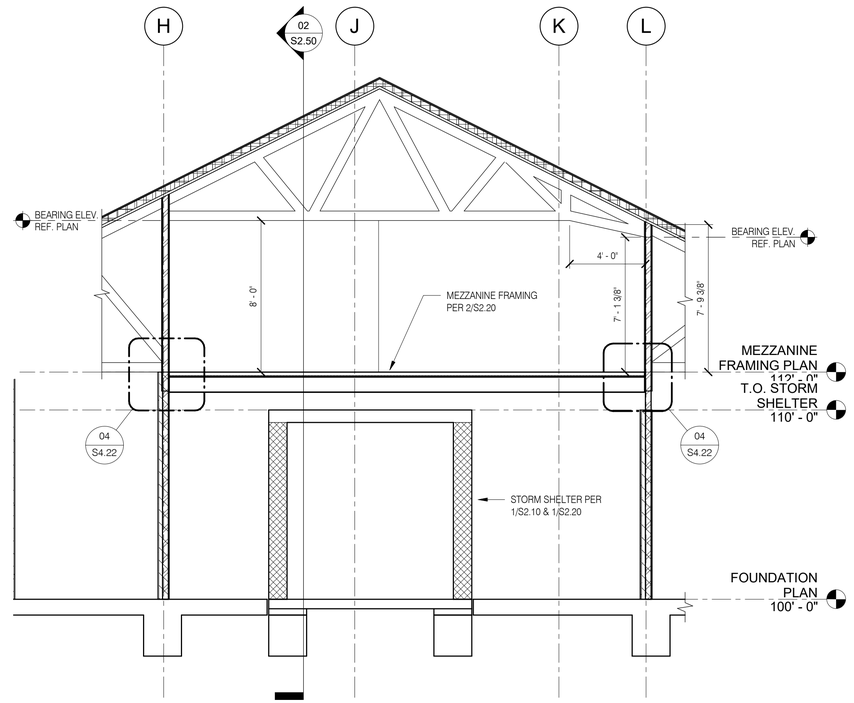
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S2.40

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03 SECTION @ APPARATUS BAY CLERESTORY WINDOW — 1/4" = 1'-0"

02 SECTION @ MEZZANINE & STORM SHELTER — 1/4" = 1'-0"



01 SECTION @ MEZZANINE & STORM SHELTER — 1/4" = 1'-0"

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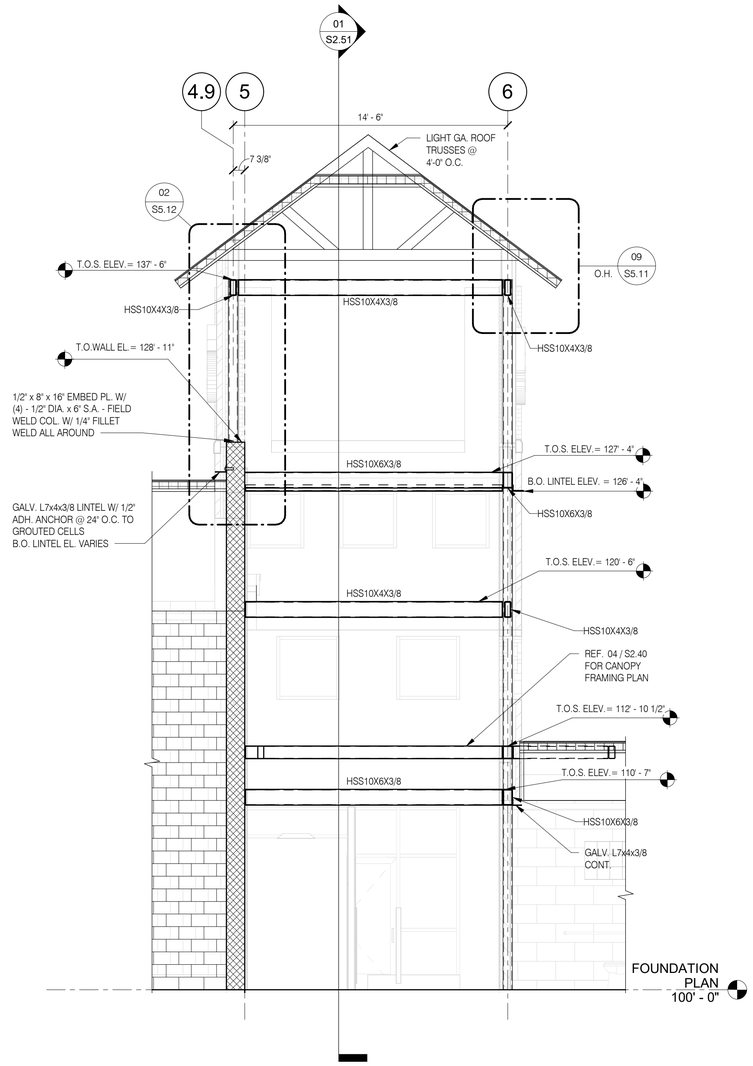
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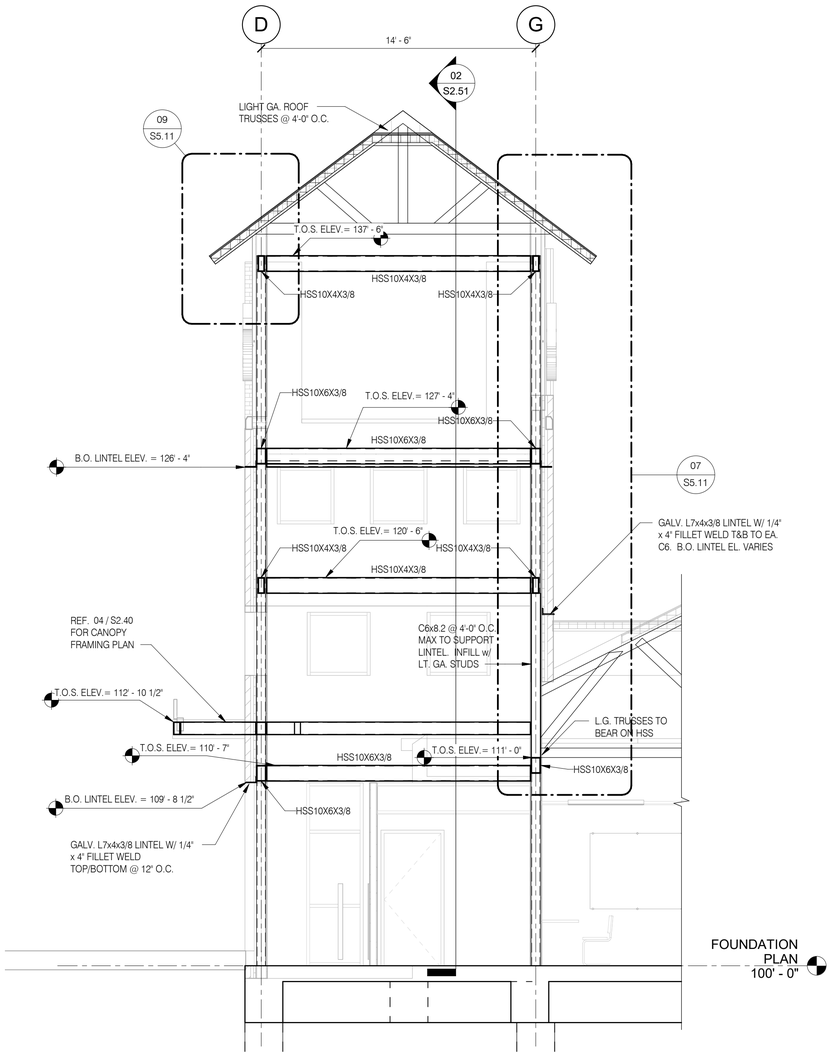
STRUCTURAL SECTIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S2.50

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02 SECTION @ TOWER E-W | 1/4" = 1'-0"



01 SECTION @ TOWER N-S | 1/4" = 1'-0"

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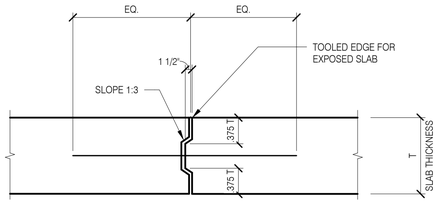
MANSFIELD FIRE STATION NO. 5

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STRUCTURAL SECTIONS

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JOB NO:	2016.166
DATE:	11/07/2019
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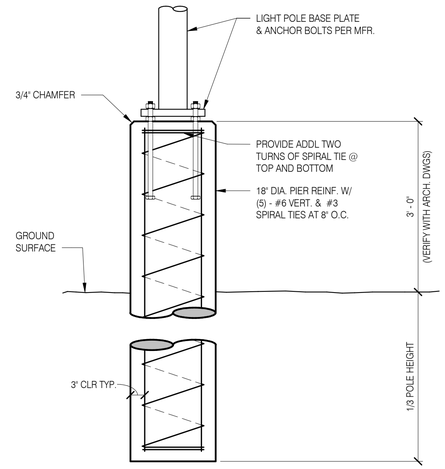


DOWELS : @ 4 1/2" SLAB: #4 x 2'-0"
@ 18" O.C. IN ADDITION TO TYP. SLAB REINFORCING

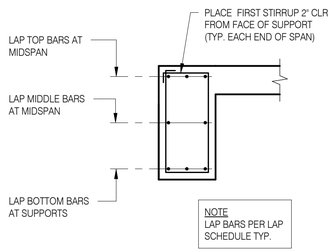
NOTES

1. PREFORMED 24 GA MIN. COLD KEY MAY BE USED.
2. CONSTRUCTION JOINT SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SPAN BETWEEN SUPPORTS. DO NOT LOCATE A SLAB CONSTRUCTION JOINT IN AN END SPAN.

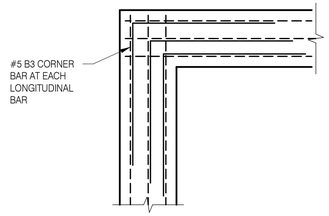
07 SLAB CONSTR. JOINT DETAIL — 3/4" = 1'-0"



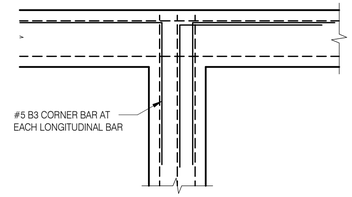
05 TYPICAL LIGHT POLE BASE — 3/4" = 1'-0"



A. TYPICAL SECTION



B. GRADE BEAM CORNER



C. GRADE BEAM INTERSECTION

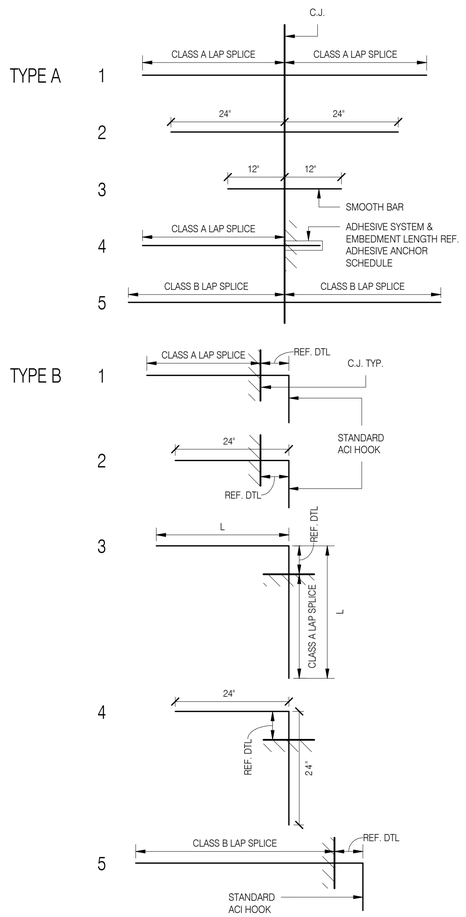
02 TYP. GRADE BEAM REINF. DETAIL — N.T.S.

NOTATION

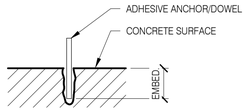
#5 A1 @ 12" O.C.

BAR SIZE — BAR TYPE — SPACING

REF. LAP SPLICE SCHED. FOR ADDITIONAL INFORMATION



06 REBAR DOWEL SCHEDULE — N.T.S.



ADHESIVE ANCHORS	
DIAMETER SIZE	EMBEDMENT
3/8"	3 1/2"
1/2"	4 1/2"
5/8"	5 5/8"
3/4"	6 3/4"
7/8"	7 7/8"
1"	9"

ADHESIVE DOWELS	
REBAR SIZE	EMBEDMENT
#3	3 3/8"
#4	4 1/2"
#5	5 5/8"
#6	6 3/4"
#7	7 7/8"
#8	9"

1. ADHESIVE TO BE ONE OF THE FOLLOWING PRODUCTS:
   - HILTI HIT - HY 200 SAFE SET
   - SIMPSON SET - XP
2. ANCHOR RODS SHALL BE ONE OF FOLLOWING:
   - FOR HILTI SYSTEM: HILTI HAS RODS OR HIT-Z RODS
   - FOR SIMPSON SYSTEM: A36 THREADED RODS
3. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
4. EMBEDMENTS SHOWN ARE TYPICAL FOR EACH ANCHOR SIZE U.N.O.
5. SPECIAL INSPECTIONS ARE REQUIRED FOR ADHESIVE ANCHORS.

04 ADH. ANCHOR & DOWEL SCHED. — N.T.S.

f'c	SPLICE CLASS	BAR SIZE								
		#3	#4	#5	#6	#7	#8	#9	#10	#11
psi	fy	60ksi	60ksi	60ksi	60ksi	60ksi	60ksi	60ksi	60ksi	60ksi
3000	CLASS A 1.0 Ld	17	22	28	33	48	55	62	70	78
	CLASS B 1.3 Ld	22	29	36	43	63	72	81	91	101
4000	CLASS A 1.0 Ld	15	19	24	29	42	48	54	61	67
	CLASS B 1.3 Ld	19	25	31	37	54	62	70	79	87
5000	CLASS A 1.0 Ld	13	17	22	26	38	43	48	54	60
	CLASS B 1.3 Ld	17	23	28	34	49	56	63	71	78
6000	CLASS A 1.0 Ld	12	16	20	24	34	39	44	50	55
	CLASS B 1.3 Ld	16	21	26	31	45	51	57	64	71
7000	CLASS A 1.0 Ld	12	15	18	22	32	36	41	46	51
	CLASS B 1.3 Ld	14	19	24	28	41	47	53	60	66

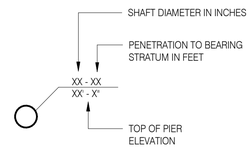
NOTES

1. TENSION DEVELOPMENT LENGTH = Ld. LENGTHS LISTED IN TABLE ARE IN INCHES.
2. USE THE ABOVE DEVELOPMENT LENGTH AND LAP SPLICE TABLE FOR BEAMS, JOISTS, COLUMNS, WALLS, SLABS, ETC. WHEN THE CLEAR SPACE BETWEEN BARS IS GREATER THAN OR EQUAL TO TWO BAR DIAMETERS AND CLEAR COVER IS NOT LESS THAN ONE BAR DIAMETER.
3. WHEN THE CLEAR SPACE BETWEEN BARS IS LESS THAN TWO BAR DIAMETERS, MULTIPLY DEVELOPMENT AND SPLICE LENGTHS LISTED IN TABLE BY 1.50.
4. PROVIDE LAP SPLICE LENGTH BASED ON THE LARGER BAR BEING LAPPED WHEN BARS OF DIFFERENT SIZES ARE LAP SPLICED.
5. FOR TOP BARS, MULTIPLY THE DEVELOPMENT AND SPLICE LENGTHS BY 1.3. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

03 TENSION LAP SPLICE SCHED. — N.T.S.

A. SECTION

D. TOP OF PIER AT BEAM/PIER CAP



C. PIER PLAN LEGEND

REINFORCING SCHEDULE			
SHAFT DIA.	VERT. REINF.	TIE SIZE	TIE SPACING
18"	9 - #6	#3	12"
24"	9 - #7	#4	12"
30"	11 - #7	#4	12"
36"	13 - #7	#4	12"
42"	11 - #8	#4	12"

B. PIER REINFORCING SCHEDULE

01 TYPICAL DRILLED PIER DETAILS — N.T.S.

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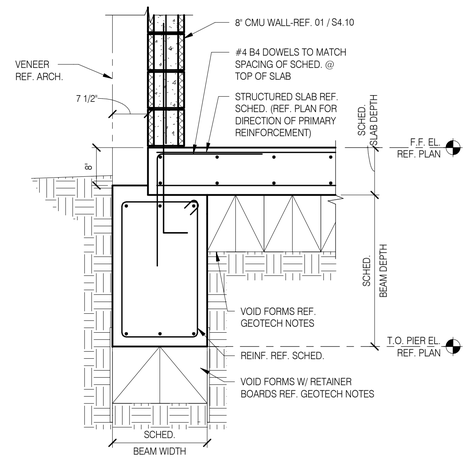
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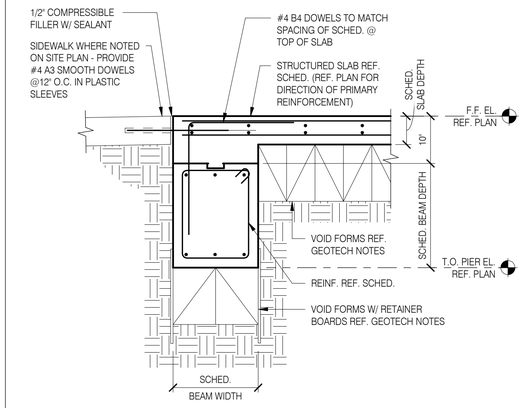
TYP. FOUNDATION DETAILS

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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S3.10

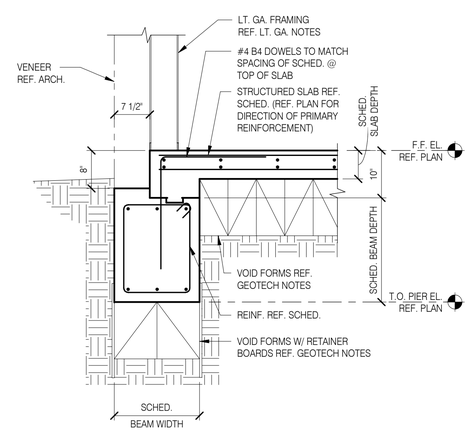
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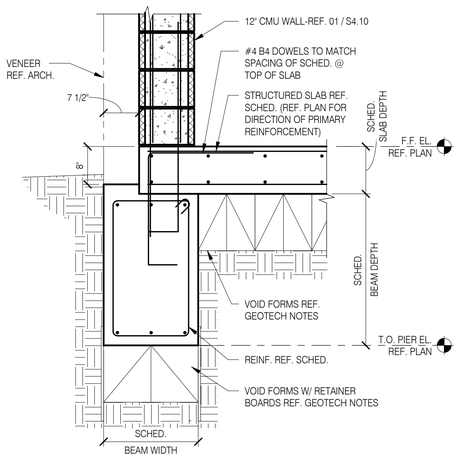
08 TYP. PERIMETER GR. BM. 8" CMU 3/4" = 1'-0"



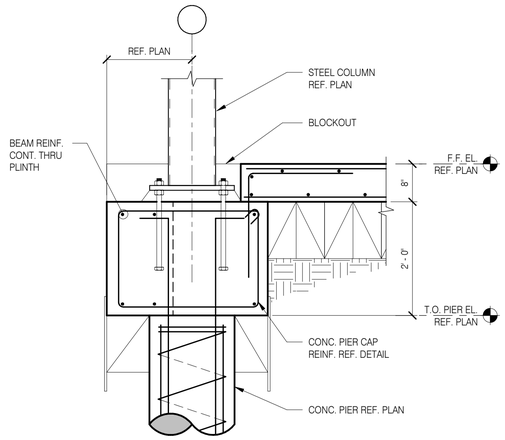
05 TYP. GRADE BEAM AT ENTRY 3/4" = 1'-0"



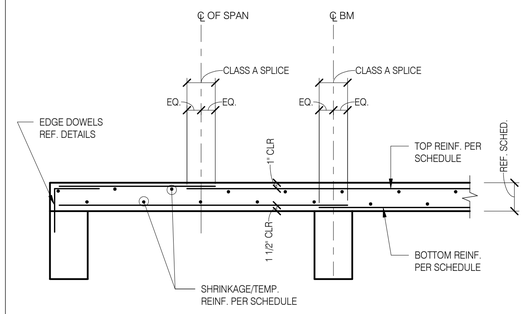
03 TYP. PERIMETER GRADE BEAM 3/4" = 1'-0"



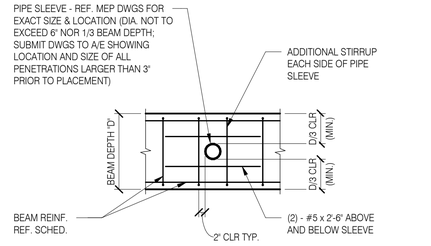
10 TYP. PERIMETER GR. BM. 12" CMU 3/4" = 1'-0"



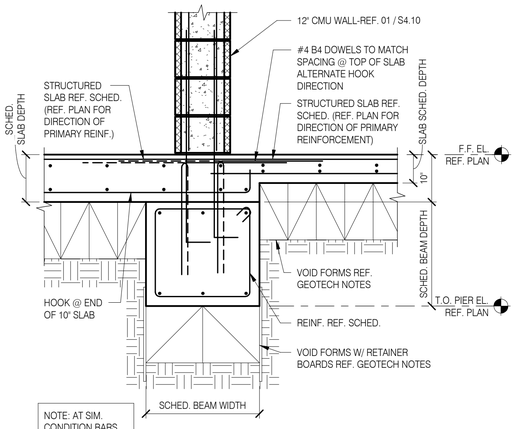
07 TYP. EXTERIOR PIER CAP 3/4" = 1'-0"



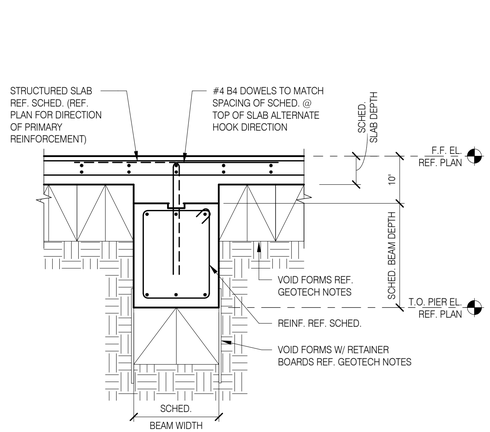
04 TYP. STRUCTURAL SLAB REINF. 3/4" = 1'-0"



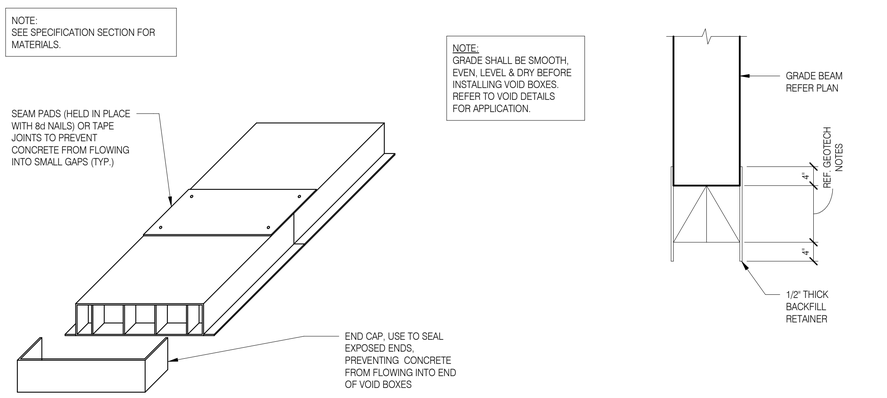
02 TYP. HORIZ. GR. BM PENETRATION 1/2" = 1'-0"



09 TYP. INT. GRADE BM AT CMU 3/4" = 1'-0"



06 TYP. INTERIOR GRADE BEAM 3/4" = 1'-0"



01 VOID FORM DETAILS 3/4" = 1'-0"

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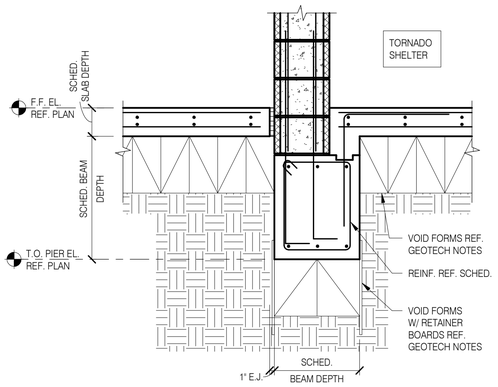
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

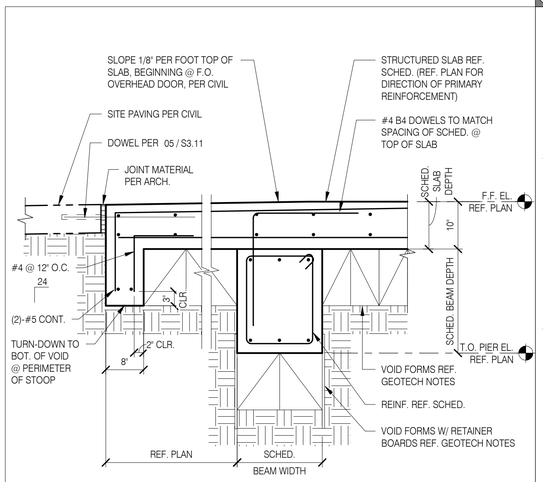
TYP. FOUNDATION DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S3.11

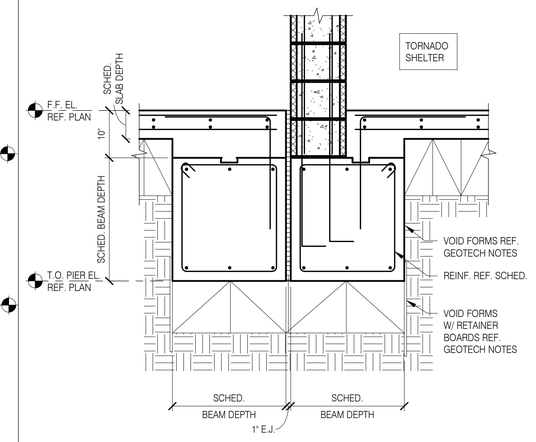
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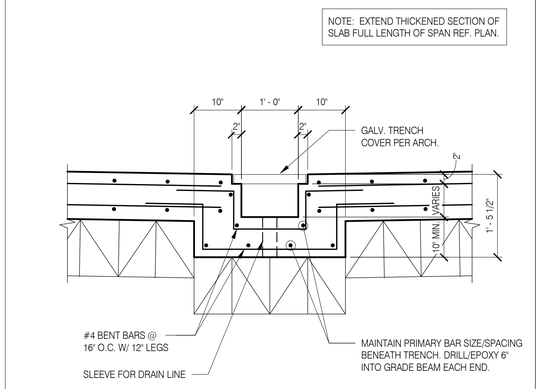
04 SECTION AT TORNADO SHELTER 3/4" = 1'-0"



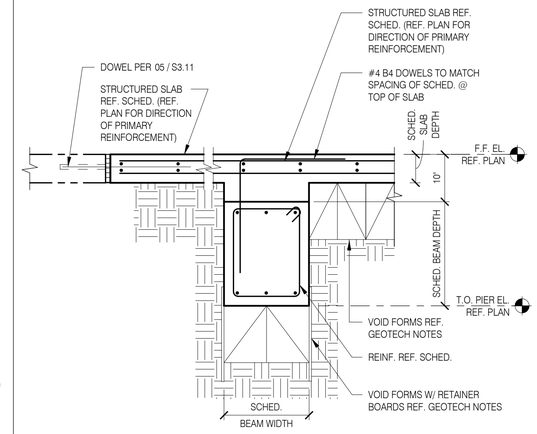
06 APPARATUS BAY ENTRY DETAIL 3/4" = 1'-0"



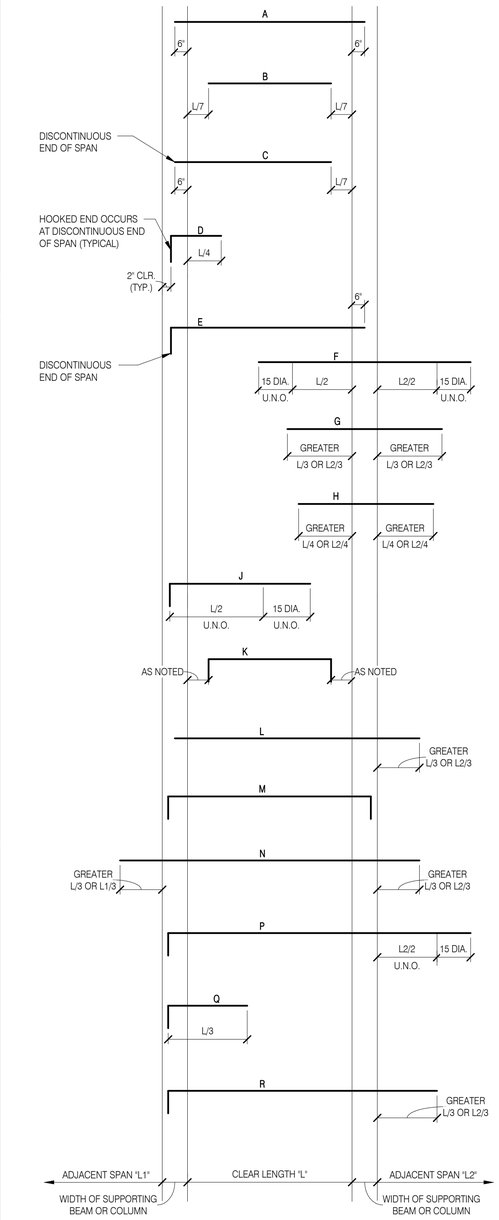
03 SECTION AT TORNADO SHELTER 3/4" = 1'-0"



05 TRENCH DETAIL 3/4" = 1'-0"



02 ENTRY @ STRUCT SLAB 3/4" = 1'-0"



01 LONGITUDINAL BAR TYPE SCHED. 1/8" = 1'-0"

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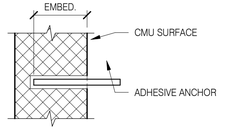
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
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TYP. FOUNDATION DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S3.12

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CMU ANCHORS	
ANCHOR DIA.	EMBEDMENT
3/8"	3 3/8"
1/2"	4 1/2"
5/8"	5 5/8"
3/4"	8 3/4"

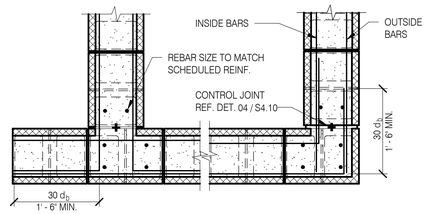
CMU NOTES:
-MIN. EDGE DISTANCE = 4"
-MIN. SPACING = 8" (1 PER CELL)
-LOCATE ANCHORS IN SOLID GROUTED CELLS

BRICK ANCHORS	
ANCHOR DIA.	EMBEDMENT
1/4"	3 1/8"
5/16"	3 1/8"
3/8"	3 1/8"
1/2"	3 1/8"

BRICK NOTES:
-MIN. EDGE DISTANCE = 8"
-MIN. SPACING = 8" (1 PER BRICK)
-LOCATE ANCHOR IN THE CENTER OF THE HOLLOW BRICK, NOT INTO MORTAR JOINTS OR SOLID PORTION OF BRICK

NOTES
1. ADHESIVE TO BE HILTI HIT - HY 270 FOR HOLLOW OR CLAY MASONRY. USE HIT-HY 200A OR 200R FOR FULLY GROUTED CMU
2. ANCHOR RODS SHALL BE A36 THREADED RODS.
3. FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.

09 MASONRY ADHESIVE ANCHORS — 3/4" = 1'-0"

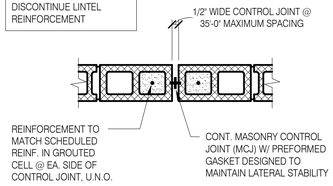


PLAN AT INTERSECTION PLAN AT CORNER

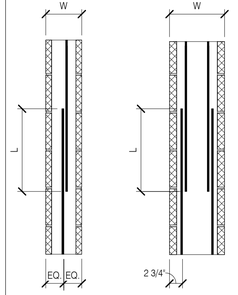
NOTES
1. PROVIDE CORNER/TEE PIECES FOR JOINT REINF.
2. TYPICAL WALL REINF. NOT SHOWN FOR CLARITY - REF. WALL SCHEDULE FOR SIZE AND SPACING.

07 CORNER DTL. AT BOND BEAMS — 3/4" = 1'-0"

NOTE
DISCONTINUE JOINT AND BOND BEAM REINF. AT CONTROL JOINTS. DO NOT DISCONTINUE LINTEL REINFORCEMENT



04 TYPICAL CONTROL JOINT — 3/4" = 1'-0"



1 VERTICAL BAR 2 VERTICAL BAR

BAR SIZE	LAP LENGTH, "L" NOMINAL CMU WIDTH, "W"				
	12"		8"		6"
	1 BAR	2 BAR	1 BAR	2 BAR	1 BAR
#3	1'-6"	2'-11"	1'-6"	2'-11"	1'-8"
#4	2'-0"	5'-2"	2'-0"	5'-2"	2'-11"
#5	2'-6"	NOTE 2	2'-7"	NOTE 2	4'-6"
#6	3'-10"		5'-2"		NOTE 2
#7	NOTE 2		NOTE 2		
#8					
#9					

NOTES
1. BARS SHALL BE SPACED W/ "DUR-O-WAL" VERTICAL BAR POSITIONER OR APPROVED EQUAL.
2. PROVIDE ONE OF THE FOLLOWING MECHANICAL SPLICE OR APPROVED EQUAL:
   - ERICO "LINTON" COUPLER SYSTEM
   - BARLOCK "S-SERIES" COUPLER SYSTEM
   - RICHMOND "US/MC-SAE" COUPLERS SYSTEM
3. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES AT CONTRACTOR'S OPTION.

02 MASONRY LAP SCHEDULE — N.T.S.

NOTE
REFER TO ARCH. FOR LINTEL PLACEMENT, FLASHING, WEEPS, CONTROL JOINTS, AND OTHER INFORMATION

B. TYPICAL ELEVATION OF MASONRY OPENING

MAX. SPAN	STEEL LINTEL SIZE
3'-0"	L 3-1/2 x 3-1/2 x 1/4
4'-0"	L 5 x 3-1/2 x 1/4
5'-0"	L 5 x 3-1/2 x 5/16
8'-0"	L 5 x 3-1/2 x 3/8
10'-0"	L 6 x 4 x 3/8

NOTE
1. REFER TO DETAILS FOR OPENINGS LARGER THAN 10'-0".

A. LOOSE LINTEL SCHEDULE

08 LOOSE LINTEL SCHEDULE — 3/4" = 1'-0"

JAMB REINFORCEMENT SCHEDULE			
REINFORCEMENT AT EDGE OF OPENINGS			
MARK	PLAN OF REINF.	B	REINF.
1	•	8	(1) - #6
2	• •	16	(2) - #6
3	• • •	24	(3) - #7
4	• •	16	(4) - #6
5	• • •	24	(6) - #6

NOTES:
1. ALL REINFORCED CELLS SHOWN SHALL BE SOLID GROUTED.
2. ALL 8" CMU WALLS SHALL HAVE JAMB TYPE (1) AT EACH SIDE OF OPENINGS U.N.O. ON PLAN.
3. ALL 12" CMU WALLS SHALL HAVE JAMB TYPE (2) AT EACH SIDE OF OPENINGS U.N.O. ON PLAN.

06 TYP. OPENING JAMBS — 3/4" = 1'-0"

12" CMU BOND BEAM LINTEL SCHEDULE		
CLEAR SPAN	HEIGHT	REINFORCEMENT
2 FT - 4 FT	8"	(2)-#4 MID-HEIGHT OF BLOCK
4 FT - 6 FT	16"	(2)-#4 TOP & BOTTOM
6 FT - 8 FT	16"	(2)-#5 TOP & BOTTOM #3 STIRRUPS @ 16" O.C.
8 FT - 10 FT	16"	(2)-#6 TOP & BOTTOM #3 STIRRUPS @ 12" O.C.
10 FT - 12 FT	24"	(2)-#6 TOP & BOTTOM #3 STIRRUPS @ 12" O.C.
12 FT - 14 FT	24"	(2)-#6 TOP & BOTTOM #3 STIRRUPS @ 8" O.C.
14 FT - 16 FT	32"	(2)-#6 TOP & BOTTOM #3 STIRRUPS @ 8" O.C.

NOTE:
1. EXTEND REBAR AND GROUND A MINIMUM OF 2'-0" BEYOND OPENING AT EACH END. HOOK IF 2'-0" CANNOT BE ACHIEVED

05 TYP. CMU WALL OPENING — N.T.S.

NOTE
REF. ARCH. DWGS FOR LOCATIONS OF MASONRY CONTROL JOINTS

03 TYPICAL 8" CMU WALL — N.T.S.

NOTE
REF. ARCH. DWGS FOR LOCATIONS OF MASONRY CONTROL JOINTS

01 TYPICAL 12" CMU WALL — N.T.S.

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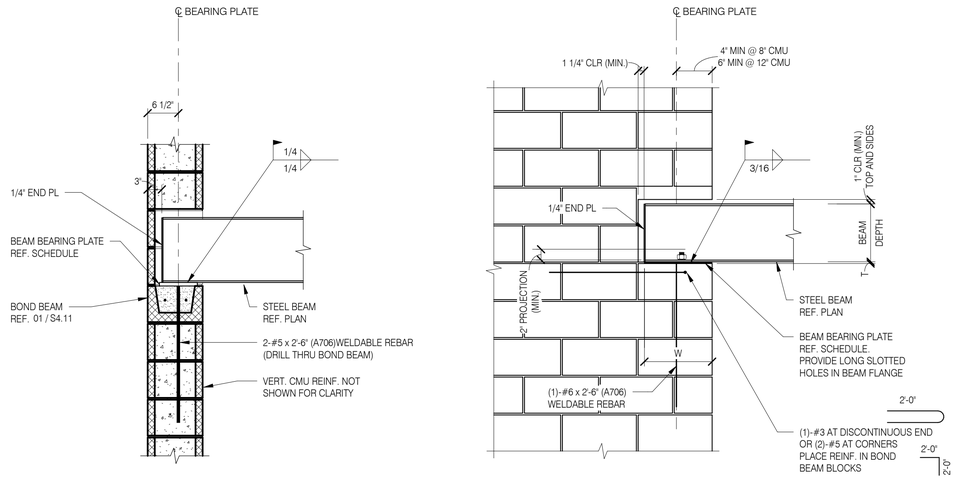
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MANSFIELD FIRE STATION NO. 5
4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063
CMU TYPICAL DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.10

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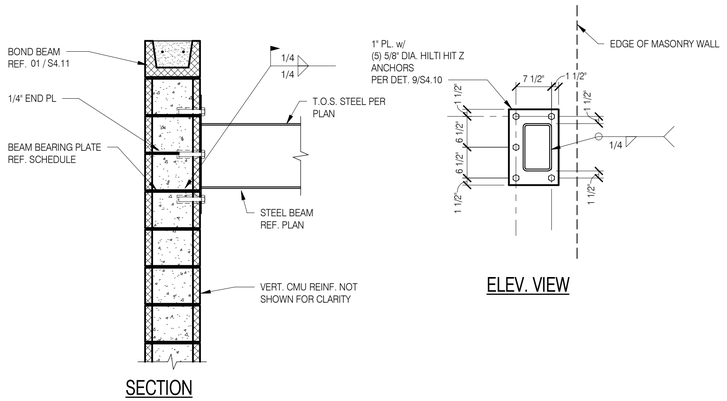


PLAN VIEW

BEAM BEARING PLATE SCHEDULE				
BEAM SIZE	T (IN)	L (IN)	W (IN)	REMARKS
W8, W10, W12	1/2	8	8	
W14, W16	1/2	10	8	
W18, W21	5/8	12	8	
W24, W27	5/8	14	8	
HSS	5/8	12	8	

NOTE
ALL CELLS UNDER BEAM SHALL BE FULLY GROUTED AND REINFORCED TO MATCH WALL REINFORCING SCHEDULE.

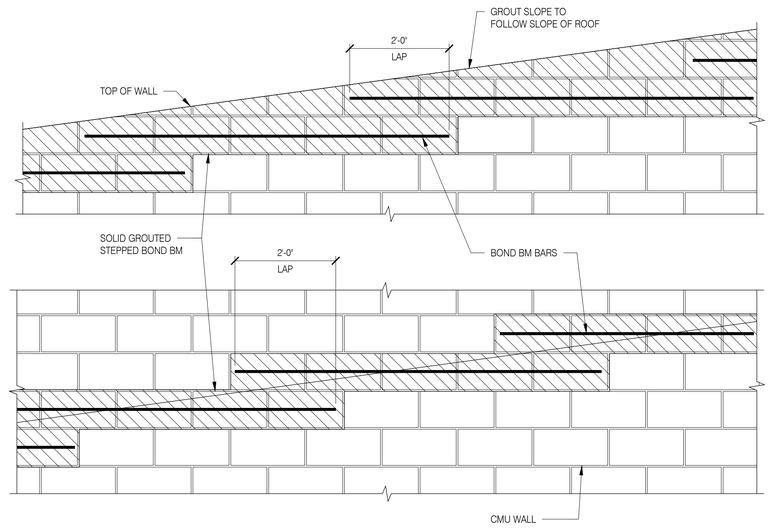
02 TYPICAL DETAILS FOR STEEL BEAM BEARING ON CMU WALL — 3/4" = 1'-0"



SECTION

ELEV. VIEW

03 HSS BEAM TO CMU WALL CONNX. DET. — 3/4" = 1'-0"



01 TYPICAL BOND BEAM STEP DETAIL — 3/4" = 1'-0"

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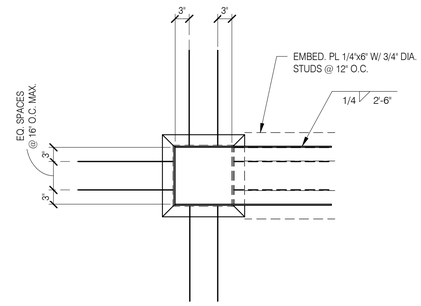
MANSFIELD FIRE STATION NO. 5

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CMU TYPICAL DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.11

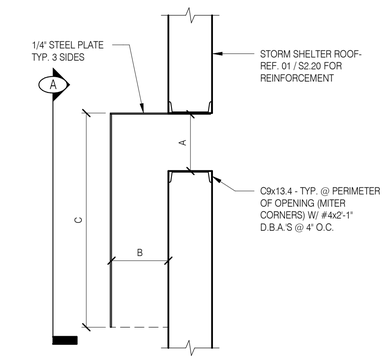
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DETAIL "A"

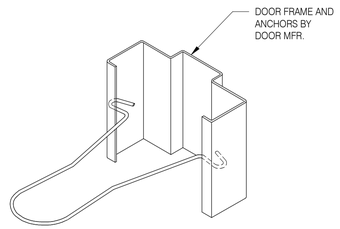
OPENING	OPENING SIZE	A	B	C
ROOF PENTRATIONS (2)	6"x6"	6"	6"	1'-6"

NOTES
1. PENETRATIONS THROUGH THE STORM SHELTER ENVELOPE LARGER THAN 3 1/2 in.² FOR RECTANGULAR OPENINGS OR 2 1/16" DIA. SHALL BE CONSIDERED AN OPENING AND SHALL BE PROVIDED WITH AN OPENING PROTECTIVE DEVICE.
2. SCHEDULED SIZES SHALL NOT CHANGE WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.

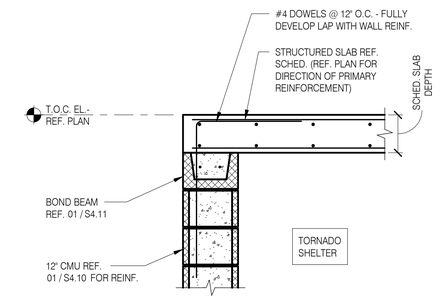


PLAN VIEW

02 TYP. ROOF OPENING — 3/4" = 1'-0"



03 TYP. CONN. AT DOOR — N.T.S.



01 SHELTER BEAM @ 12" CMU — 3/4" = 1'-0"

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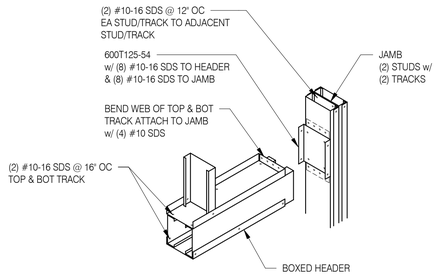
MANSFIELD FIRE STATION NO. 5

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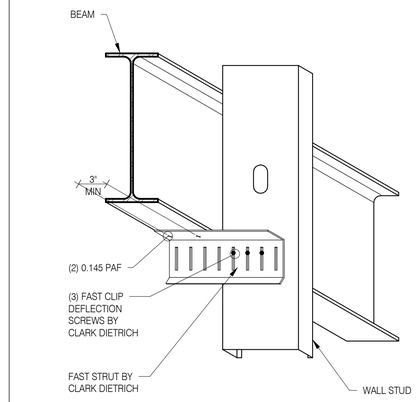
CMU SHELTER DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.12

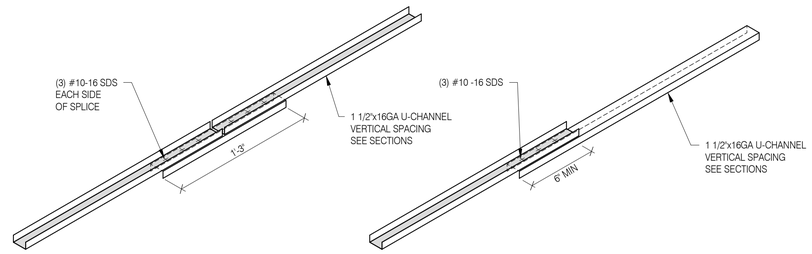
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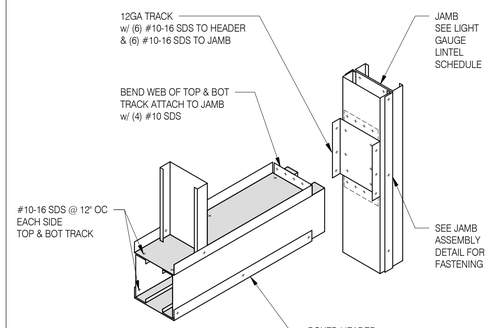
10 TYP. BOXED HEADER AT OPNG. 1/2" = 1'-0"



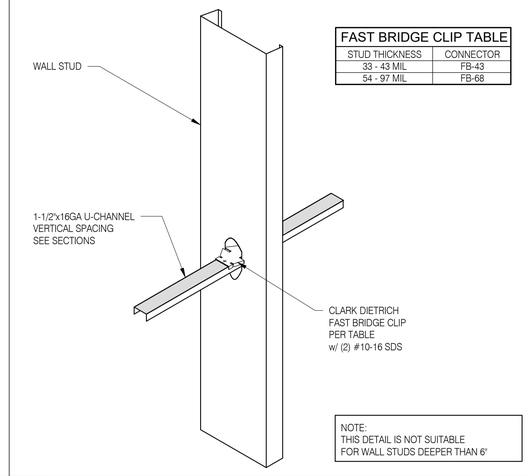
07 CONNECTION DETAIL 1 1/2" = 1'-0"



03 TYPICAL U-CHANNEL SPLICE DETAIL 1 1/2" = 1'-0"



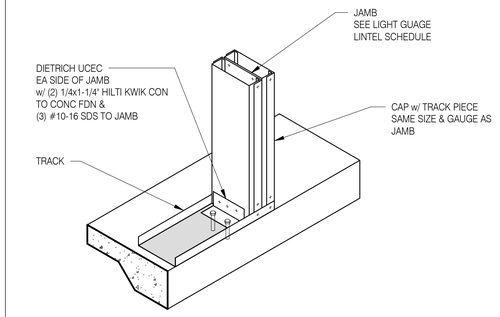
09 TYP. BOXED HEADER AT OPG 3/4" = 1'-0"



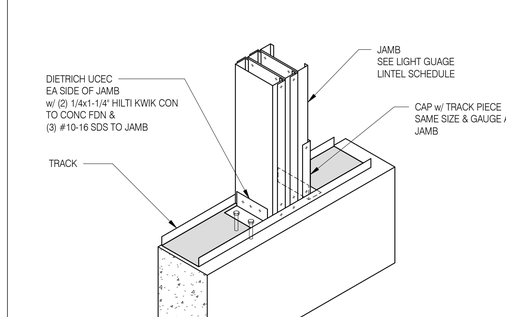
FAST BRIDGE CLIP TABLE	
STUD THICKNESS	CONNECTOR
33 - 43 MIL	FB-43
54 - 97 MIL	FB-68

NOTE:
THIS DETAIL IS NOT SUITABLE
FOR WALL STUDS DEEPER THAN 6"

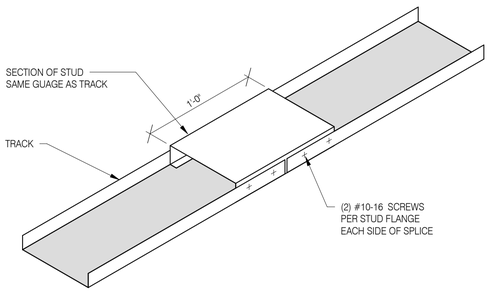
06 BRIDGING DETAIL 1 1/2" = 1'-0"



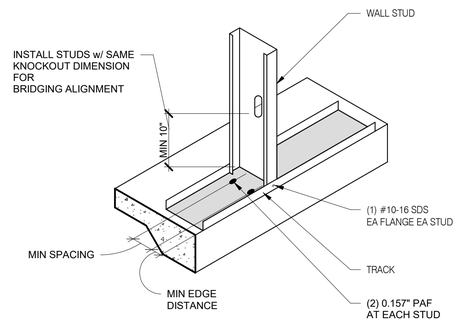
04 TYP. DOOR JAMB BASE DETAIL 3/4" = 1'-0"



02 TYP. WINDOW JAMB BASE DETAIL 3/4" = 1'-0"



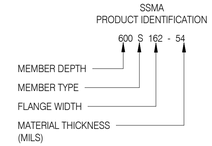
08 TYPICAL BOTTOM TRACK SPLICE 1 1/2" = 1'-0"



05 TYPICAL STUD TO TRACK DETAIL 3/4" = 1'-0"

FASTENER SCHEDULE			
CONNECTOR	SUBSTRATE	DESCRIPTION	PRODUCT
SCREWS	METAL TRACK	#10-16 x 5/8" PAN HEAD	BUILDEX 'TEKS' COMPASS
	STUD TO STUD	#10-16 x 5/8" HEX HEAD	BUILDEX 'TEKS' COMPASS
	METAL TO STRUCTURAL STEEL	#12-24 x 1-1/4" HEX HEAD #5 TIP	BUILDEX 'TEKS' HILTI KWIK-PRO
	WOOD FRAMING OR PLYWOOD	#12-24 x 1-1/4" HEX HEAD #5 TIP	BUILDEX 'TEKS' HILTI KWIK-PRO
P.A.F.'s	CONCRETE OR GROUTED CMU	0.145"ø x 1-1/4" / 0.157"ø x 1-1/4"	HILTI X-DNI / HILTI X-U
	STRUCTURAL STEEL	0.145"ø x 5/8" / 0.157"ø x 5/8"	HILTI X-EDNI / HILTI X-U

NOTES: SEE SECTIONS AND DETAILS FOR LOCATION
AND NUMBER OF CONNECTORS



MATERIAL THICKNESS TABLE		
MILS	GAUGE	DESIGN THICKNESS
33	20	0.0346"
43	18	0.0451"
54	16	0.0566"
68	14	0.0713"
97	12	0.1017"

MEMBER TYPE TABLE	
S	STUD
T	TRACK
F	HAT, FURRING CHANNEL
U	CHANNEL

01 TYPICAL COLD FORMED INDENTIFICATION AND FASTENER SCHEDULE 1/2" = 1'-0"

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No.	Description	Date
1	Revision 1	Date 1

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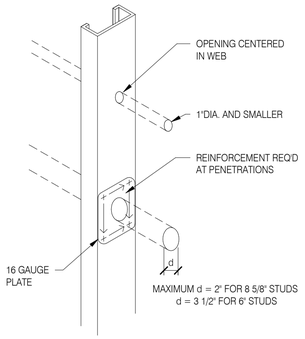
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

TYPICAL LIGHT GAUGE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.20

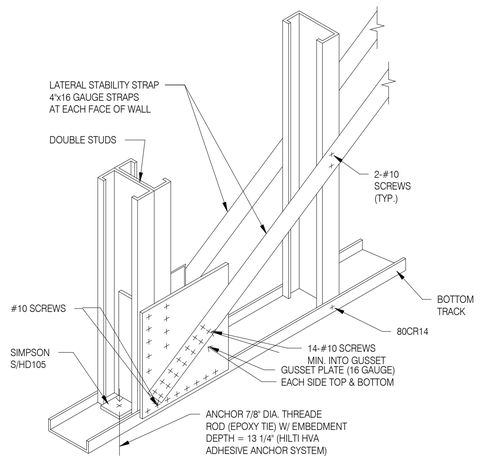
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NOTE: FLANGES SHALL NOT BE NOTCHED OR CUT

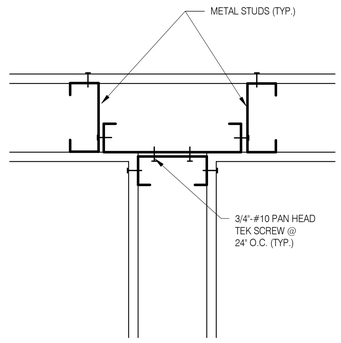
TYPICAL DETAIL

08 PENETRATION THRU STUDS — N.T.S.

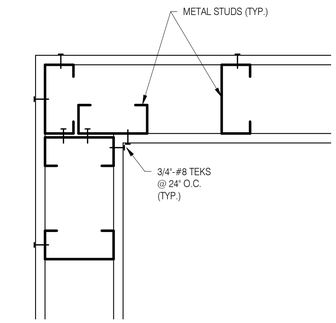


TYPICAL DETAIL

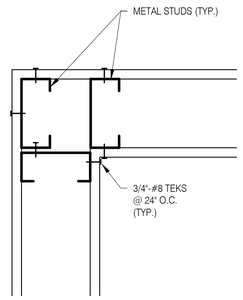
07 STRAP BRACING @ SHEAR WALL — N.T.S.



WALL INTERSECTION FRAMING

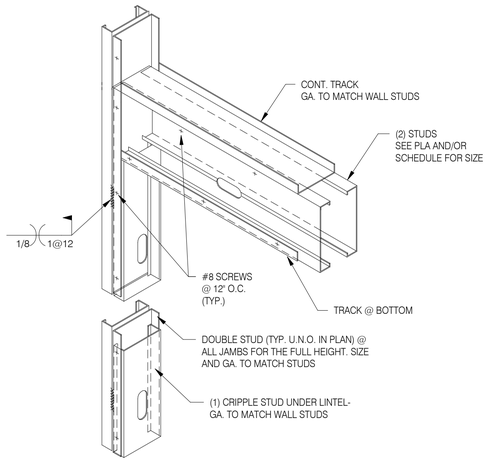


INTERIOR CORNER FRAMING



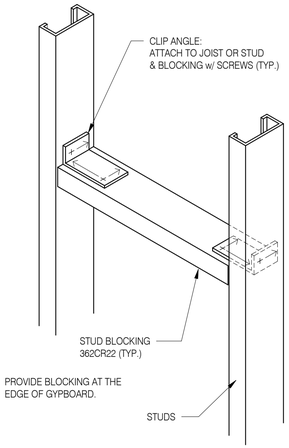
EXTERIOR CORNER FRAMING

06 TYPICAL WALL FRAMING CONNX'S — N.T.S.

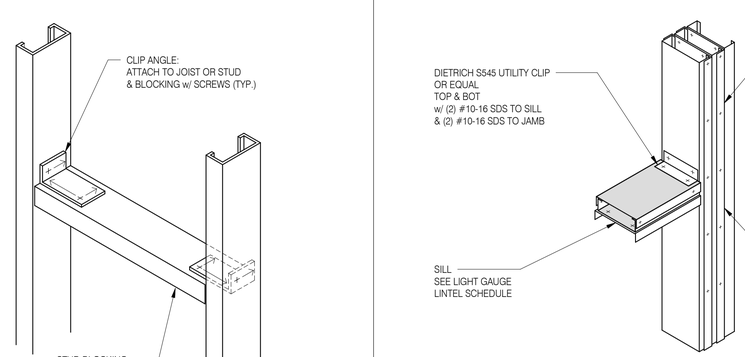


TYPICAL DETAIL

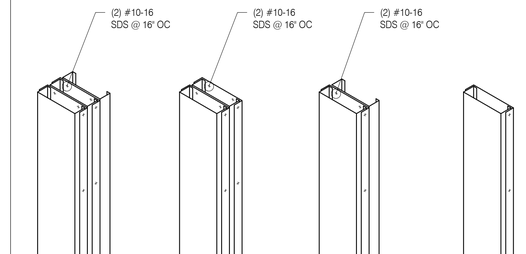
05 MTL STUD LINTEL @ LOAD BRG. — N.T.S.



04 TYPICAL BLOCKING DETAIL — N.T.S.

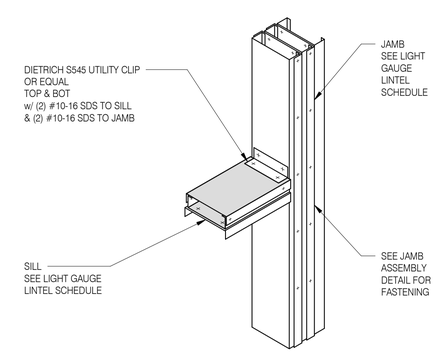


01 TYPICAL BRIDGING DETAIL — 3/4" = 1'-0"



NOTE:
1. SEE LIGHT GAUGE LINTEL SCHEDULE FOR REQUIRED NUMBER OF STUDS

03 TYPICAL JAMB ASSEMBLY — 3/4" = 1'-0"



NOTE:
WHEN SILL OR HEADER IS A SINGLE TRACK
ATTACH TO JAMB WITH (1) UTILITY CLIP
WHEN JAMB IS A STRUCTURAL COLUMN
ATTACH UTILITY CLIP TO COLUMN WITH (3) 0.145 PAF

02 TYP. SILL AT JAMB CONN. DTL — 3/4" = 1'-0"

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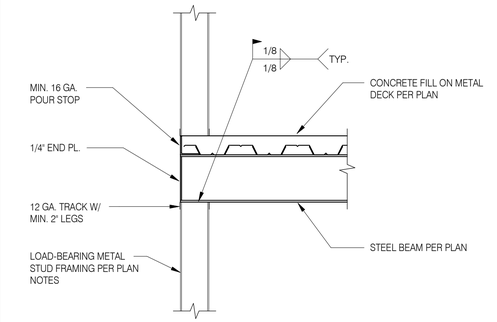
MANSFIELD FIRE STATION NO. 5

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TYPICAL LIGHT GAUGE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.21

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04 DETAIL @ MEZZANINE — 3/4" = 1'-0"

HEADER SCHEDULE - WALLS

LOCATION	WALL TYPE	INTERIOR/ EXTERIOR	MAX. SPAN	SIZE	Fy (KS1)	REMARK
BELOW ROOF STRUCTURE	LOAD BEARING	INTERIOR AND EXTERIOR	4'-0"	2-60CSJ18	33	
BELOW ROOF STRUCTURE	LOAD BEARING	INTERIOR AND EXTERIOR	6'-0"	2-60CSJ16	50	
BELOW ROOF STRUCTURE	LOAD BEARING	INTERIOR AND EXTERIOR	8'-0"	2-60CSJ14	50	
BELOW 2nd FLR. SLAB	LOAD BEARING	INTERIOR AND EXTERIOR	3'-4"	2-60CSJ16	50	
BELOW 2nd FLR. SLAB	LOAD BEARING	INTERIOR AND EXTERIOR	5'-0"	2-80CSJ14	50	
ALL FLOORS	NON LOAD BRG.	INTERIOR	3'-4"	SINGLE TRACK 18 GAUGE	33	
ALL FLOORS	NON LOAD BRG.	INTERIOR	6'-0"	DOUBLE TRACK 18 GAUGE	33	
ALL FLOORS	NON LOAD BRG.	INTERIOR	8'-0"	2-362CSJ20	33	

NOTES:

(a) LOCATION AND CLEAR SPANS OF OPENINGS IN WALLS SHALL BE PER ARCHITECTURAL DRAWINGS.

(b) ABOVE SIZES ARE FOR TYPICAL OPENING CONDITIONS. USE THE BEAM SIZES SHOWN ON PLANS FOR SPECIFIC CONDITIONS.

FASTENER SCHEDULE

ITEM	TYPE & SIZE	SPACING
1/2" GYPBOARD TO STUDS	7/8" PLYTEK	6" O.C. @ EDGES 12" O.C. @ SUPPORTS
5/8" GYPBOARD TO STUDS	1 1/8" PLYTEK	6" O.C. @ EDGES 12" O.C. @ SUPPORTS
STUD TO STUD (BACK TO BACK)	3/4" #8 TEKS PAN HEADS	1 @ 24" O.C. THROUGH WEB
DIAGONAL BRACING TO STUD	1/2" #8 TEKS LOW PROFILE PAN HEAD	1 @ EACH STUD
STUD TO TOP PLATE (TRACK)	3/4" #8 TEKS LOW PROFILE PAN HEAD	1 @ EACH FLANGE
STUD TO BOTTOM PLATE (TRACK)	3/4" #8 TEKS LOW PROFILE PAN HEAD	1 @ EACH FLANGE

WALL OPENINGS DETAILS & SCHEDULE

METAL STUD PROPERTIES

MEMBER	HEIGHT (IN.)	FLANGE (IN.)	LIP (IN.)	AREA $(IN.)^2$	IX $(IN.)^4$	LOCATION	SPACING
600T125-33	6"	1 1/4"	--	0.294	1.428	BOTTOM TRACK	CONT.
600T200-97	6"	2"	--	1.015	5.773	TOP TRACK	CONT.
362S137-33	3 5/8"	1 3/8"	3/8"	0.236	0.479	INTERIOR WALLS	@ 16" O.C.
600S137-33	6"	1 3/8"	3/8"	0.318	1.582	EXTERIOR WALLS	@ 16" O.C.

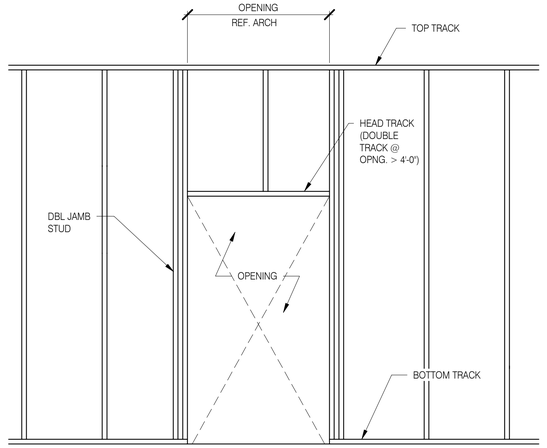
PROPERTIES PROVIDED BY DIETRICH INDUSTRIES, INC.

SILL TRACK ANCHORAGE

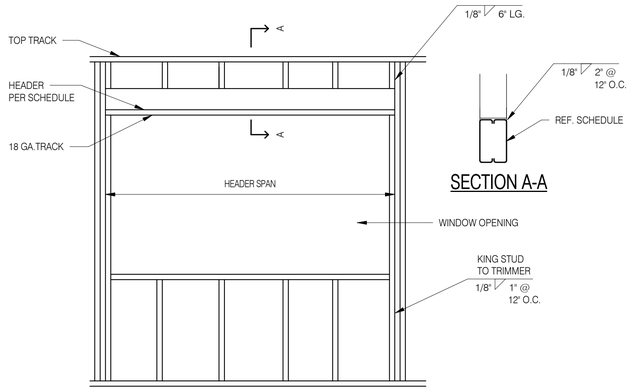
APPLICATION	ANCHORAGE
EXTERIOR WALLS	HILTI 1/4" KWIK BOLT II @ 8" O.C.
INTERIOR WALLS	HILTI DNI 32 P8 @ 12" O.C.

METAL STUD, FASTENER & SILL TRACK ANCHORAGE SCHEDULES

03 METAL STUDS SCHEDULES — 3/4" = 1'-0"



02 OPENING IN NON LOAD BEARING WALLS — N.T.S.



01 TYPICAL OPENING IN LOAD BEARING WALLS — N.T.S.

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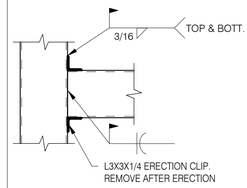
MANSFIELD FIRE STATION NO. 5

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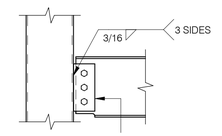
TYPICAL LIGHT GAUGE DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S4.22

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SC8: HSS BEAM TO HSS COLUMN



SC5: BEAM TO HSS COLUMN

SHEAR CONNECTION DESIGN CRITERIA

A) DESIGN FOR UNFACTORED REACTIONS NOTED ON PLANS.

B) IF REACTIONS ARE NOT NOTED ON PLANS: DESIGN NON-COMPOSITE BEAM CONNECTIONS FOR 1/2 THE TOTAL DESIGN UNIFORM LOAD FOR THE BEAM SPAN FROM THE AISC - UNIFORM LOAD TABLES; DESIGN COMPOSITE BEAM CONNECTIONS FOR 1.7 TIMES THE NON-COMPOSITE REACTION AS DESCRIBED ABOVE.

C) DETAIL CONNECTIONS PER AISC - ASD 9TH EDITION SPECIFICATION USING MIN. 5/16" THICK DOUBLE CLIP ANGLES OR MIN. 3/8" SHEAR PLATE. USE 3/4" DIA. A 325-N BOLTS OR LARGER FOR ALL STRUCTURAL CONNECTIONS U.N.O.. SHEAR PLATE CONNECTIONS SHALL BE BOLTED @ BEAM AND WELDED @ SUPPORT. DOUBLE CLIP ANGLES CAN BE EITHER BOLTED OR WELDED PROVIDED THEY COMPLY WITH LOADING REQUIREMENTS AND AISC STANDARDS.

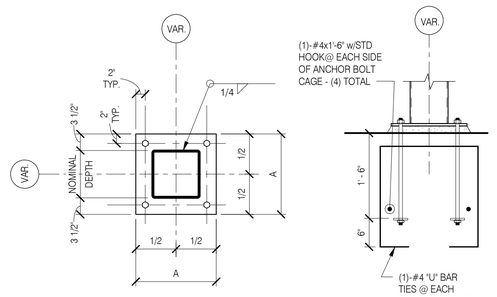
D) IN ADDITION TO SHEAR CONNECTION DESIGN CRITERIA PER NOTES A - C, PROVIDE A MINIMUM OF THE FOLLOWING NUMBER OF CONNECTION BOLTS AS FOLLOWS:

W8 - W12	2 BOLTS
W14-W16	3 BOLTS
W18-W21	4 BOLTS
W24	5 BOLTS

E) SUBMIT SEALED CALCULATIONS OF ALL NON-STANDARD CONNECTIONS FOR ENGINEERS REVIEW .

F) SUBMIT SEALED CALCULATIONS OF BRACE CONNECTIONS FOR ENGINEER'S REVIEW .

02 TYPICAL SHEAR CONNECTIONS — N.T.S.



COLUMN:	REF. PLAN (HSS TUBE OR PIPE)
PLATE THICKNESS:	1 1/2"
PLATE GRADE:	REF. GENERAL NOTES
BOLT DIAMETER:	1 1/8"
BOLT SPECIFICATION:	REF. GENERAL NOTES
GROUT PAD:	2" THICK, NON-SHRINK

01 TYPICAL COLUMN BASE DETAILS — 3/4" = 1'-0"

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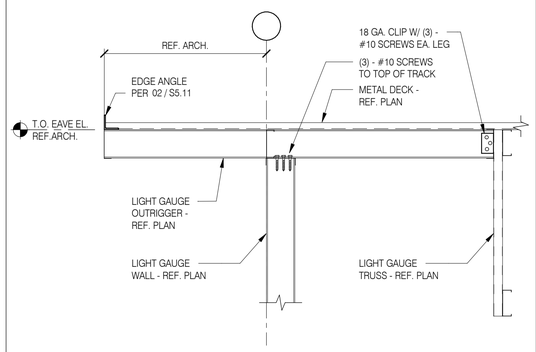
MANSFIELD FIRE STATION NO. 5

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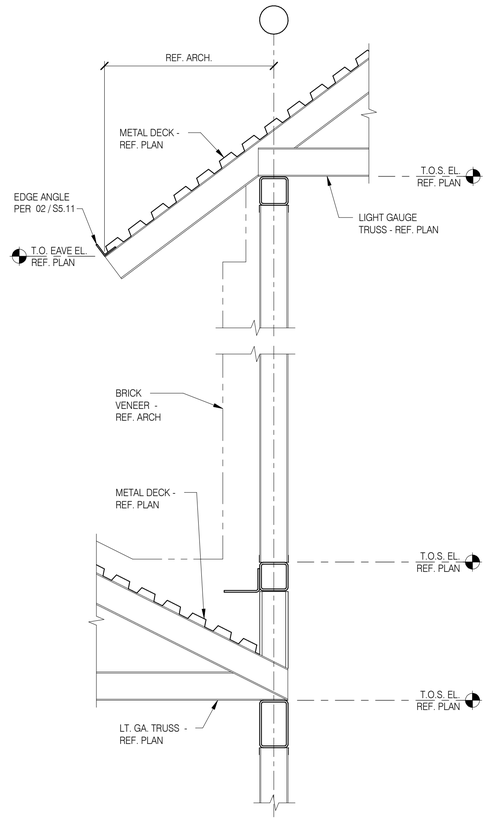
TYPICAL STEEL DETAILS

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JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S5.10

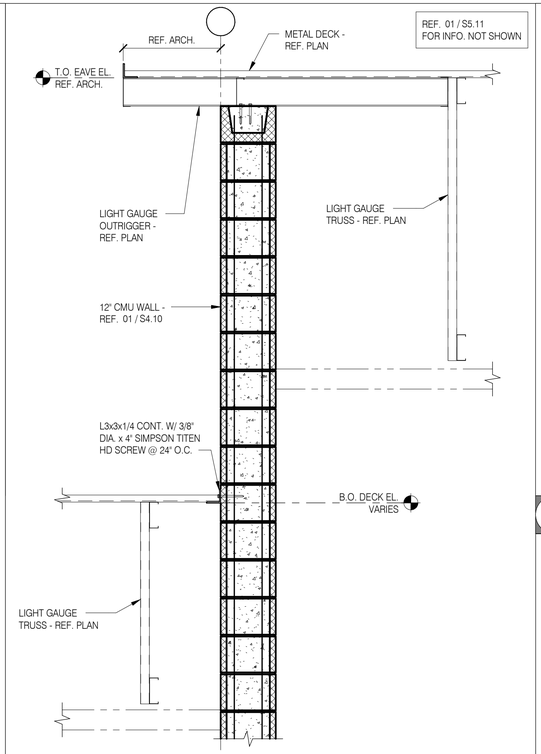
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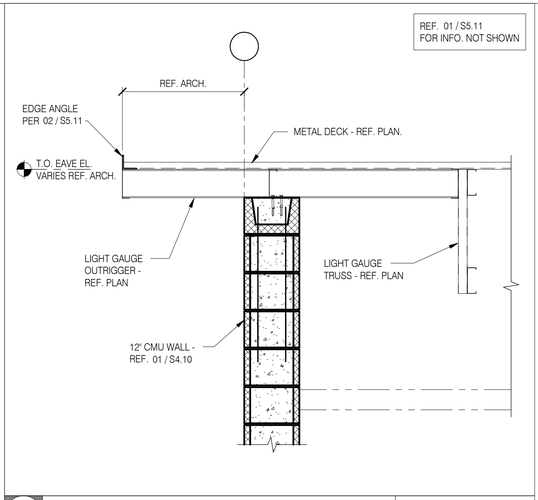
10 TYP. OUTRIGGER DETAIL | 3/4" = 1'-0"



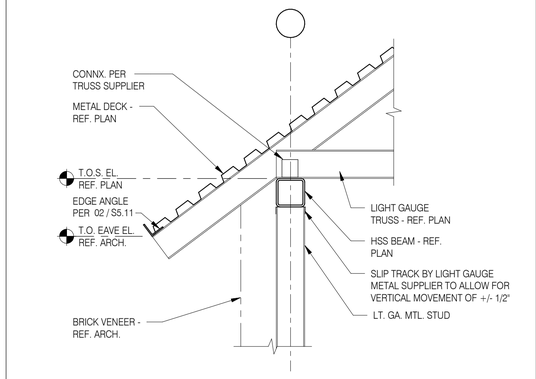
07 TRUSS BRG. @ TOWER WALL | 3/4" = 1'-0"



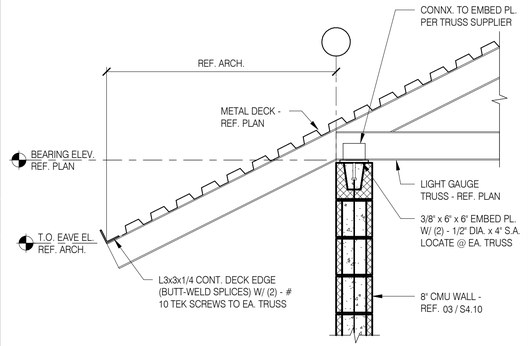
05 HIGH/LOW ROOF @ 12" CMU | 3/4" = 1'-0"



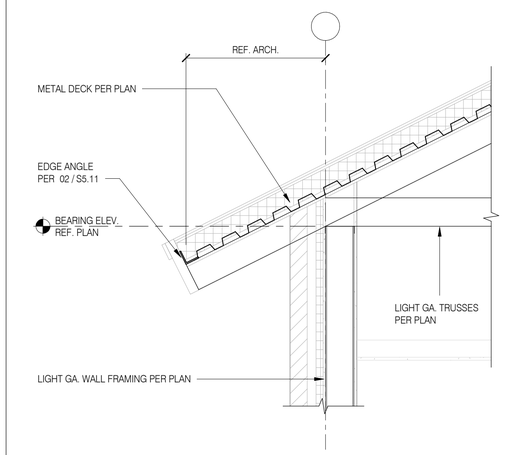
03 OUTRIGGER @ EAVE - 12" CMU | 3/4" = 1'-0"



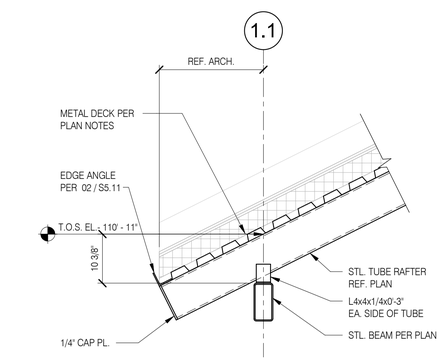
09 TRUSS BRG. @ TOWER ROOF | 3/4" = 1'-0"



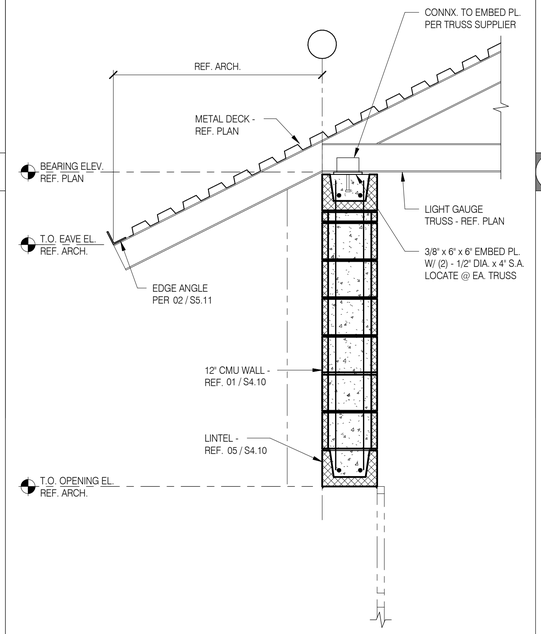
02 TRUSS @ EAVE - 8" CMU | 3/4" = 1'-0"



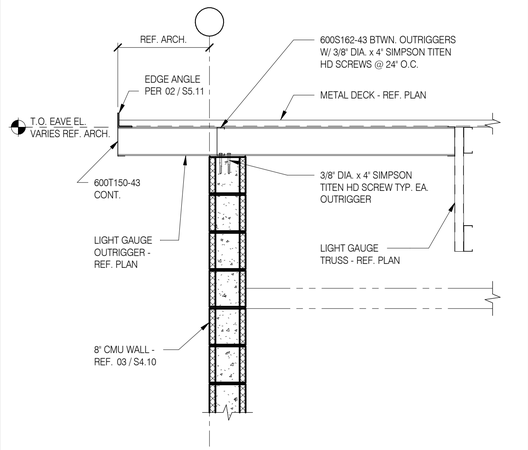
08 TRUSS BRG. ON LG WALL | 3/4" = 1'-0"



06 CANOPY DETAIL | 3/4" = 1'-0"



04 TRUSS @ EAVE - 12" CMU | 3/4" = 1'-0"



01 OUTRIGGER @ EAVE - 8" CMU | 3/4" = 1'-0"

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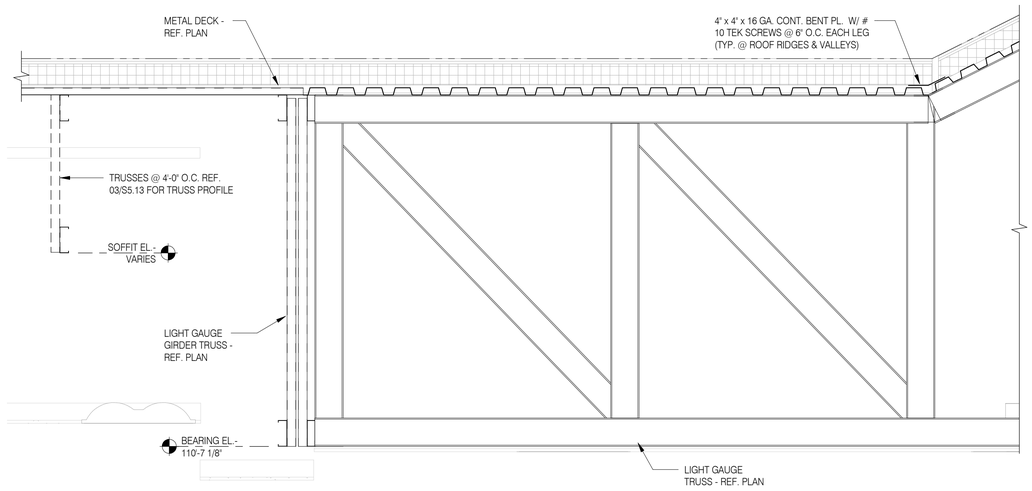
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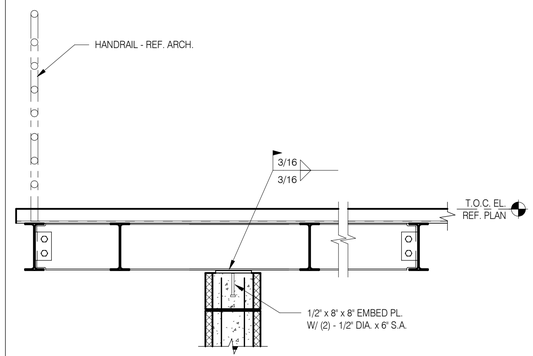
FRAMING DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S5.11

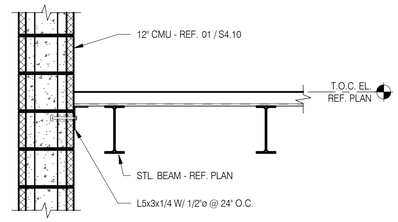
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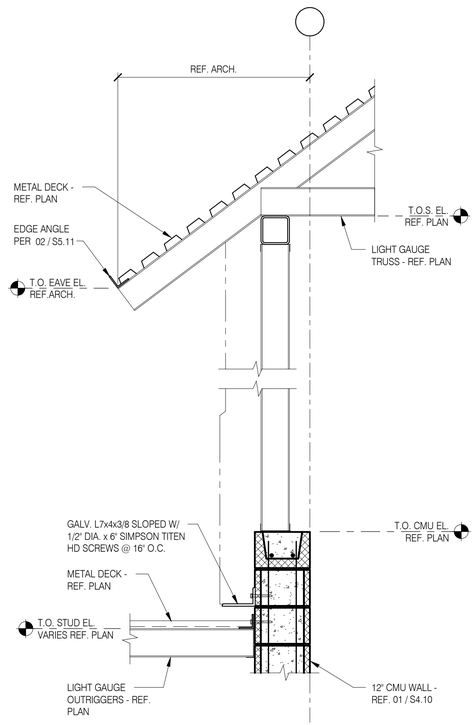
06 SECTION @ GIRDER TRUSS — 3/4" = 1'-0"



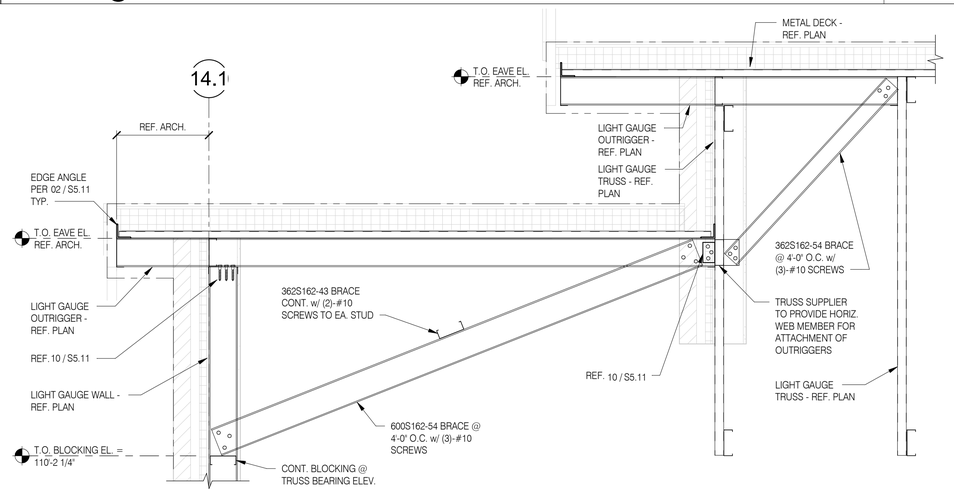
04 SECTION @ MEZZANINE STAIR — 3/4" = 1'-0"



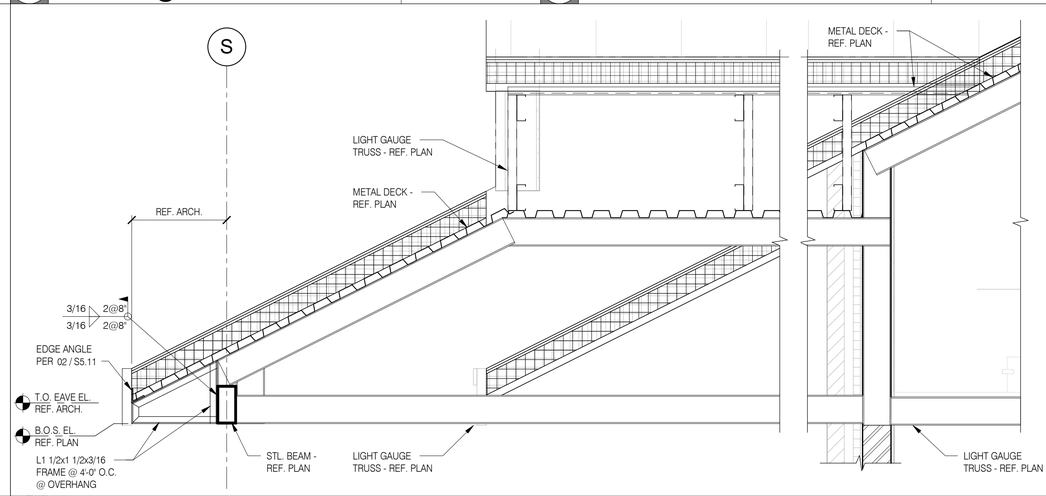
03 SECTION @ MEZZANINE — 3/4" = 1'-0"



02 SECTION — 3/4" = 1'-0"



05 SECTION — 3/4" = 1'-0"



01 SECTION @ REAR ENTRY — 3/4" = 1'-0"

armstrong-douglass structural engineers
1601 Bryan St.
Suite 202
Dallas, Texas 75201
214.237.7022
Registration No. F-5635
www.armstrong-douglass.com

19.097.00

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

SCOTT R. ARMSTRONG 83205 LICENSED PROFESSIONAL ENGINEER
11/07/2019

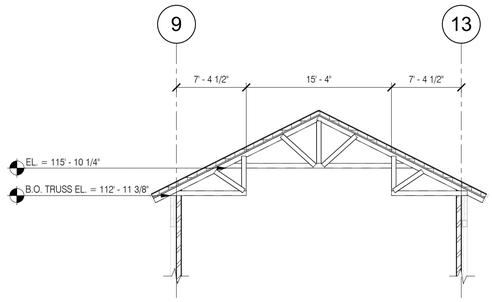
MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

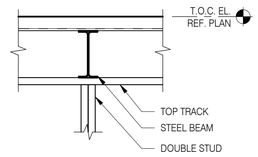
FRAMING DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S5.12

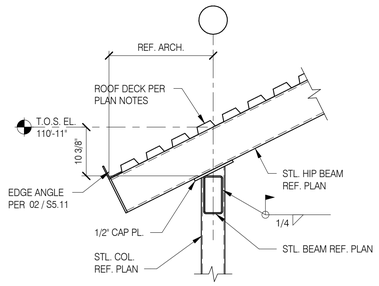
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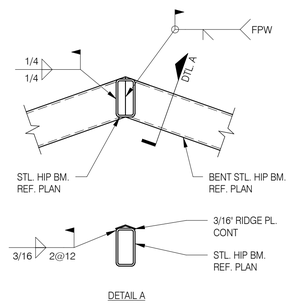
03 TRUSS PROFILE 1/8" = 1'-0"



02 TYP. BEAM BEARING ON STUD 3/4" = 1'-0"

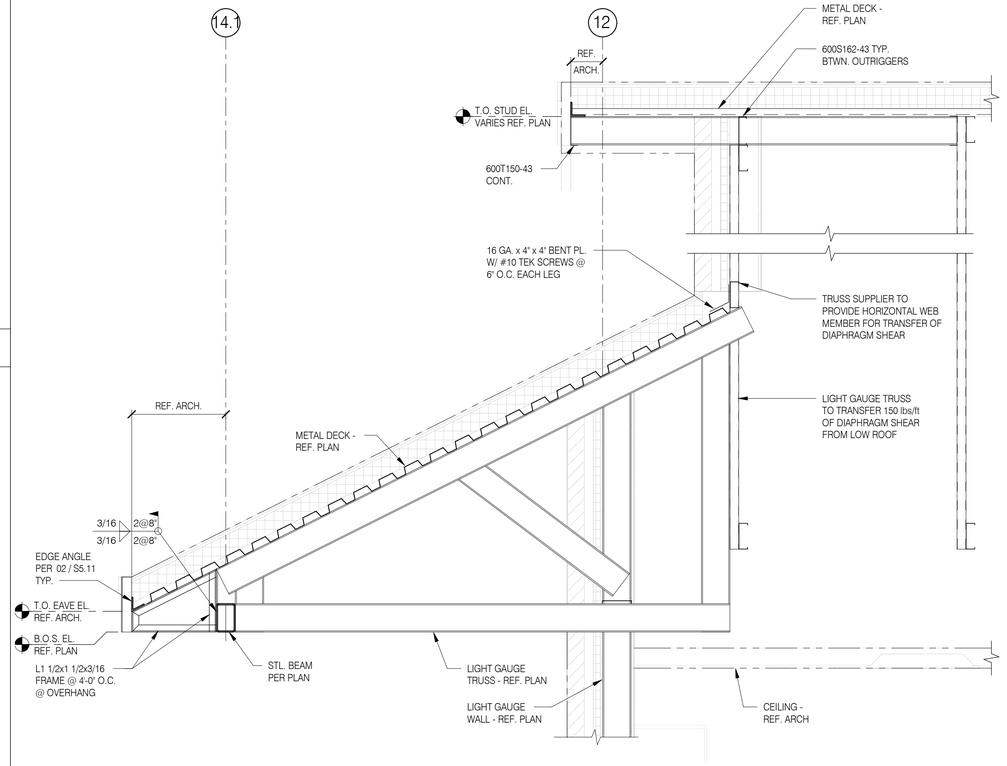


05 SECTION 3/4" = 1'-0"



DETAIL A

04 SECTION 3/4" = 1'-0"



01 SECTION 3/4" = 1'-0"

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19.097.00

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

STATE OF TEXAS
SCOTT R. ARMSTRONG
83205
LICENSED
PROFESSIONAL ENGINEER
11/07/2019

MANSFIELD FIRE STATION NO. 5

4444 NATIONAL PARKWAY
MANSFIELD, TEXAS 76063

FRAMING DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	S5.13

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MECHANICAL SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

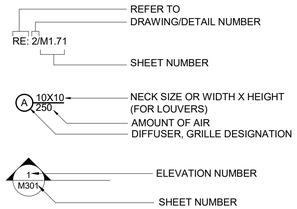
GENERAL NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.
3. CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTOR'S FAILURE TO FIELD COORDINATE.
5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.
7. PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE MECHANICAL EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.
8. COORDINATE ELECTRICAL REQUIREMENTS OF APPROVED MECHANICAL EQUIPMENT WITH THE ELECTRICAL SUB-CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL EQUIPMENT, DEVICES, WIRING, OR CONDUIT.
9. PROVIDE GENERAL CONTROL WIRING, THERMOSTATS, MOTORIZED DAMPERS AND CONDUIT ASSOCIATED WITH HVAC EQUIPMENT. COORDINATE THE LOCATION OF ALL THERMOSTATS, ROOM SENSORS, ETC WITH THE ARCHITECT AND ALL OTHER TRADES PRIOR TO INSTALLATION. IF A CONFLICT WITH MILLWORK, LIGHT SWITCHES, WINDOWS, ETC EXISTS, NOTIFY THE ARCHITECT OF THE POTENTIAL INTERFERENCE PRIOR TO INSTALLATION. INSTALL THERMOSTATS WITH PROTECTIVE LOCKING COVER, CENTERED AT 4'-0" ABOVE FINISHED FLOOR, UNLESS OTHERWISE INDICATED. COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE TEXAS ACCESSIBILITY'S STANDARD (TAS).
10. ALL DIMENSIONS SHOWN ON THE DRAWINGS FOR DUCTWORK ARE NET INSIDE CLEAR DIMENSIONS. FOR RECTANGULAR DUCT, THE FIRST FIGURE OF THE DUCT SIZE INDICATES THE DIMENSION OF THE FACE SHOWN. VERIFY THAT THE DUCTWORK SPECIFIED WILL FIT IN THE SPACE AVAILABLE USING THE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DRAWINGS AS REFERENCE PRIOR TO FABRICATION AND INSTALLATION. ROUND DUCT OF EQUAL NET INSIDE CLEAR AREA MAY BE USED IN LIEU OF RECTANGULAR DUCT.
11. PROVIDE TURNING VANES ON ALL RECTANGULAR SUPPLY, EXHAUST AND RETURN DUCTWORK INCLUDING THE TOP AND BOTTOM OF VERTICAL DUCTS.
12. PROVIDE A LOCKING QUADRANT VOLUME DAMPER AT THE TAP OF EACH RUN-OUT TO DIFFUSERS FOR BALANCING PURPOSES, UNLESS OTHERWISE INDICATED. THE RUN-OUT DUCT SIZE IS THE SAME SIZE AS THE DIFFUSER OR GRILLE NECK SIZE UNLESS OTHERWISE INDICATED.
13. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL FIRE RATED WALLS AND CEILINGS. PROVIDE FIRE DAMPERS AND/OR COMBINATION FIRE/SMOKE DAMPERS IN DUCTWORK AT ALL LOCATIONS WHERE DUCTS PASS THROUGH FIRE RATED ASSEMBLY. MECHANICAL SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING FIRE AND FIRE/SMOKE DAMPERS. COORDINATE CONSTRUCTION REQUIREMENTS AND PROVISIONS FOR CONNECTIONS TO FIRE ALARM SYSTEM.
14. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH SMACNA STANDARDS. ALL DUCT WORK ASSOCIATED WITH CONSTANT VOLUME AIR HANDLING EQUIPMENT SHALL BE CONSTRUCTED TO 2" W.G. AND SEALED TO SMACNA CLASS B. SEAL ALL SEAMS WITH MASTIC SEALANT UL 181 LISTED FOR THE APPLICATION USED. SEALANT SHALL BE DESIGNED FOR USE ON METAL DUCT AND FLEXIBLE DUCT.
15. ALL RECTANGULAR AND ROUND SUPPLY AND RETURN DUCTWORK LOCATED IN EXPOSED INTERIOR AREAS SHALL BE INTERNALLY LINED WITH DUCT LINER AND EXTERNALLY PAINTED. REFER TO ARCHITECT FOR COLOR SELECTION.
16. INSTALL DX PIPING AS SPECIFIED, INCLUDING FILTER/DRYER, SIGHT GLASS, ISOLATION/CHARGING VALVES AND ALL APPURTENANCES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL BE ACCOMPLISHED IN A NEAT AND ORDERLY FASHION, AS APPROVED BY THE ENGINEER. COORDINATE FOR ROUTING OF DX PIPING, UP INSIDE OF WALLS, ETC. AS REQUIRED, TERMINATING AT AHU's. PROVIDE BRACING/ISOLATION, AS REQUIRED TO PREVENT VIBRATION OF DX PIPING INSIDE WALLS, ETC. SIZE, ROUTE AND INSULATE DX PIPING PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATION REQUIREMENTS.
17. PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN EQUIPMENT UNLESS NOTED OTHERWISE. PROVIDE ISOLATION AS INDICATED OR AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
18. SOME PIPES AND DUCTS SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.
19. SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.
20. EXPAND OR REDUCE DUCTS AT EQUIPMENT CONNECTIONS BASED ON THE EQUIPMENT PURCHASED, WITH TRANSITIONS NOT TO EXCEED 30 DEGREES. SIZES SHOWN ON SCHEDULES, ETC. ARE FOR GUIDANCE ONLY. ASPECT RATIO SHALL BE NO GREATER THAN 4:1, PER SMACNA'S GUIDELINES.
21. ALL DUCTS WITH A DIMENSION GREATER THAN 12" PASSING THRU A NON-RATED WALL SHALL HAVE THE OPENING FRAMED IN WITH METAL STUDS. COORDINATE OPENING SIZE AND LOCATION WITH OTHER TRADES.
22. WHERE DAMPERS ARE LOCATED ABOVE HARD CEILINGS PROVIDE CONCEALED YOUNG REGULATORS. REGULATORS SHALL NOT BE LOCATED IN CORRIDORS, PATEINT CARE, OR TREATMENT AREAS. EACH REGULATOR SHALL BE LABLE PER THE SPECIFICATIONS.
23. ALL EQUIPMENT LISTED TO UL508A OR UL 1995 SHALL HAVE A SHORT CIRCUIT CURRENT RATING (SCCR) OF THE ASSEMBLY MEETING OR EXCEEDING THE RATING OF THE PANEL FROM WHICH IT IS POWERED. SCCR RATINGS MAY BE REDUCED BASED ON ACTUAL CALCULATIONS BASED ON ACTUAL CONSTRUCTION AND IN ACCORDANCE WITH NEC. RATING SHALL BE STAMPED ON EQUIPMENT AT THE FACTORY. REFER TO ELECTRICAL FOR ADDITIONAL INSTRUCTIONS.

ABBREVIATIONS

AD	ACCESS DOOR	L	LENGTH
A/C	AIR CONDITIONING UNIT	LAT	LEAVING AIR TEMPERATURE
A/E	ARCHITECT/ENGINEER	LPC	LOW PRESSURE CONDENSATE
AFF	ABOVE FINISHED FLOOR	LPS	LOW PRESSURE STEAM
AFS	AIR FLOW SWITCH	LB	POUNDS
AHU	AIR HANDLING UNIT	LRA	LOCKED ROTOR AMPS
APPROX	APPROXIMATE	LWT	LEAVING WATER TEMPERATURE
BAS	BUILDING AUTOMATION SYSTEM	MAX	MAXIMUM
BHP	BRAKE HORSE POWER	MBH	1000 BRITISH THERMAL UNITS / HOUR
BTU	BRITISH THERMAL UNIT PER HOUR	MCA	MINIMUM CIRCUIT AMPACITY
C/A	COMBUSTION AIR	MFR	MANUFACTURER
CC	COOLING COIL	MIN	MINIMUM
CFH	CUBIC FEET PER HOUR	N/A	NOT APPLICABLE
CFM	CUBIC FEET PER MINUTE	N/O,N/C	NORMALLY OPEN, NORMALLY CLOSED
CLG	CEILING	O/A	OUTSIDE AIR/FRESH AIR
CU	CONDENSING UNIT	OBD	OPPOSED BLADE DAMPER
D	EQUIPMENT DRAIN	O/C	ON CENTER
DEG	DEGREES	PEF	PURGE EXHAUST FAN
DB	DRY BULB	PH	PHASE
DN	DOWN	PROVIDE	FURNISH AND INSTALL
(E)	EXISTING	PRV	PRESSURE REDUCING VALVE
EAT	ENTERING AIR TEMPERATURE	PSI	POUNDS PER SQUARE INCH
E/A	EXHAUST AIR	R/A	RETURN AIR
EDH	ELECTRIC DUCT HEATER	RE:	REFERENCE, REFER
EF	EXHAUST FAN	RL	REFRIGERANT LIQUID
EQUIP	EQUIPMENT	RLA	RUNNING LOAD AMPS
EWT	ENTERING WATER TEMPERATURE	RM	ROOM
°F	DEGREES FAHRENHEIT	RPM	REVOLUTIONS PER MINUTE
FCU	FAN COIL UNIT	RS	REFRIGERANT SUCTION
FD	FIRE DAMPER	S/A	SUPPLY AIR
FLA	FULL LOAD AMPS	SD	SMOKE DETECTOR
FLR	FLOOR	SF	SQUARE FOOT, SUPPLY FAN
FPVAV	FAN POWERED VAV	SPECS	SPECIFICATIONS
FSD	FIRE SMOKE DAMPER	T, TSTAT	THERMOSTAT, ROOM SENSOR
FT, '	FOOT, FEET	T/A	TRANSFER AIR
FT. WG	FEET WATER GAUGE	THRU	THROUGH
GA	U.S. GAUGE	TSP	TOTAL STATIC PRESSURE
GPM	GALLONS PER MINUTE	TSTAT	THERMOSTAT OR ROOM SENSOR
H	HEIGHT	TYP	TYPICAL
HP	HORSEPOWER	UL	UNDERWRITERS LABORATORIES, INC.
HPC	HIGH PRESSURE CONDENSATE	UH	UNIT HEATER
HPS	HIGH PRESSURE STEAM	V	VOLTS
HWR	HEATING WATER RETURN	VAV	VARIABLE AIR VOLUME
HWS	HEATING WATER SUPPLY	VEL	VELOCITY
HZ	HERTZ	VFD	VARIABLE FREQUENCY DRIVE
IN.	INCH, INCHES	W/	WITH
IN.WG	INCHES WATER GAUGE	WB	WET BULB
J-BOX	JUNCTION BOX	W/O	WITHOUT
kW	KILOWATT		

DRAWING/DETAIL REFERENCE



MISCELLANEOUS

1	DRAWING NOTE REFERENCE (I.E., NOTES BY SYMBOL)
	CONNECTION INTO EXISTING

BASIS OF MECHANICAL DESIGN

PRIMARY MECHANICAL CODES :

MECHANICAL: 2018 INTERNATIONAL MECHANICAL CODE (WITH CITY AMENDMENTS).
ENERGY: 2018 INTERNATIONAL ENERGY CODE (WITH CITY AMENDMENTS).

PROJECT DESIGN VALUES :

OUTDOOR DESIGN TEMPERATURE (SUMMER):	99.6°F (DRYBULB), 75.5°F (WETBULB)
AMBIENT TEMPERATURE AT CONDENSING UNITS:	105°F (DRY BULB, SUMMER)
OUTDOOR DESIGN TEMPERATURE (WINTER):	21.5°F (DRY BULB)
INDOOR DESIGN TEMPERATURE (SUMMER):	75°F (DRY BULB), 50% RH
INDOOR DESIGN TEMPERATURE (WINTER):	70°F (DRY BULB)
OUTSIDE AIR REQUIREMENTS:	PER IMC TABLE 403.3

SYMBOLS

SYMBOL	DESCRIPTION
20/20	ACOUSTICAL DUCT LINING (FIGURES SHOWN ARE INSIDE DUCT DIMENSIONS
20/20	SUPPLY AIR DUCT UP (POSITIVE PRESSURE)
20/20	RETURN, EXHAUST OR OUTSIDE AIR INTAKE DUCT UP (NEGATIVE PRESSURE)
20/20	SUPPLY AIR DUCT DOWN (POSITIVE PRESSURE)
20/20	RETURN, EXHAUST OR OUTSIDE AIR INTAKE DUCT DOWN (NEGATIVE PRESSURE)
18"□	ROUND DUCT UP
18"□	ROUND DUCT DOWN
	ARROW INDICATES DIRECTION OF AIR FLOW
0.5 1.0	INDICATES SMACNA PRESSURE CLASS OF DUCT CONSTRUCTION
UP	CHANGE OF ELEVATION, RISE(UP) OR DROP (DN) IN DIRECTION OF ARROW
AD	ACCESS DOOR, BOTTOM (UNLESS OTHERWISE NOTED) SIZE AS NOTED OR SPECIFIED
AD	ACCESS DOOR, SIDE, SIZE AS NOTED OR SPECIFIED
	RECTANGULAR DUCT SQUARE ELBOW WITH TURNING VANES
W, R=3W/2	RECTANGULAR DUCT RADIUS ELBOW
D, R=3D/2	ROUND DUCT RADIUS ELBOW
16/20, 20/20	TRANSITION CONCENTRIC UNLESS TOP LEVEL(TOP LVL) OR BOTTOM LEVEL(BOT LVL) IS NOTED
20/20, 16"	TRANSITION, RECTANGULAR TO ROUND CONCENTRIC UNLESS TOP LEVEL (TOP LVL) OR BOTTOM LEVEL (BOT LVL) IS NOTED
	DUCT FLEXIBLE CONNECTION
	SOUND ATTENUATOR
	SQUARE CEILING DIFFUSER (SUPPLY) (4-WAY UNLESS OTHERWISE INDICATED)
	SQUARE CEILING GRILLE (RETURN OR EXHAUST)
T TS	THERMOSTAT (OR) TEMP SENSOR
	DUCT SPLITTER WITH DAMPER
M	MOTORIZED DAMPER
or	MANUAL VOLUME DAMPER
FD	FIRE DAMPER

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

HVAC LEGENDS & NOTES



264.11.11.2019.19024

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Texas Registration # F-10963

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	M0.01

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MULTI-ZONE DX SPLIT SYSTEM SCHEDULE

MARK FCU- /HR- /CU-	INDOOR UNIT										HEAT RECOVERY UNIT		CONDENSING UNIT									FCU(EACH)/CU COOLING PERFORMANCE DATA				REMARKS
	ARRANGEMENT	UNIT CFM	O/A CFM	ESP (IN)	POWER CONNECTION V	PH	MCA	MOCP	UNIT WT	LG MODEL SERIES	# OF PORTS	LG MODEL SERIES	QUANTITY COMP	REF TYPE	QUANTITY FANS	POWER CONNECTION V	PH	MCA	MOCP	UNIT WT	LG MODEL SERIES	MIN CAP (MBH) TOTAL	SENS	AMB DB	MIN. SEER	
131,132,133,134,135,136/5	CEILING CASSETTE	250	25	N/A	208	1	0.2	15	35	ARNU053	6	PRH063A	1	R-410A	2	208	1	25.4	40	260 LBS	ARUB060	6.1	5.5	105	17.0	1,2,3,4,5,6,7,8,9
109,125,127/2/5	CEILING CASSETTE	250	25	N/A	208	1	0.2	15	35	ARNU053	3	PRH033A										6.1	5.5	105	17.0	1,2,3,4,5,6,7,8,9

REMARKS:

1. CONDENSING UNIT SERVES MULTIPLE INDOOR UNITS.
2. SIZE, ROUTE, INSULATE AND PROVIDE APPURTENANCES FOR DX PIPING SYSTEMS, IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTUCTIONS.
3. LISTED CAPACITIES ARE FOR THE EACH FAN COIL UNIT. UNITS SHALL PERFORM TO LISTED CAPACITIES.
4. LG IS THE BASIS OF DESIGN. ACCEPTABLE MANUFACTURERS ARE: DAIKIN, MITSUBISHI, CARRIER.
5. SEER / EER. RATINGS ARE AT ARI CONDITIONS FOR CONDENSING UNIT ONLY.
6. PROVIDE FILTER DRYER AND SIGHT GLASS ON THE DX LINES.
7. PROVIDE INTEGRAL CONDENSATE PUMP AND DIRECT CONNECTION OUTDOOR AIR.
8. PROVIDE CENTRAL TOUCH-SCREEN CONTROL/DISPLAY UNIT FOR INDIVIDUAL UNIT CONTROL.
9. PROVIDE FACTORY PROGRAMMABLE THERMOSTAT 7-DAY, 2-EVENT.

DX SPLIT SYSTEM WITH GAS HEAT SCHEDULE

MARK AHU- CU-	SEPARATED COMBUSTION GAS FURNACE WITH DX COIL														CONDENSING UNIT											COOLING PERFORMANCE DATA						REMARKS
	ARRANGEMENT	UNIT CFM	O/A CFM	ESP (IN)	HP	POWER CONNECTION V	PH	MCA	MOCP	ENTERING DB	INPUT MBH	OUTPUT MBH	STAGES	WEIGHT LBS	TRANE MODEL SERIES	COMP NO.	COMP RLA	REF TYPE	COND FANS NO.	COND FANS FLA	POWER CONNECTION V	PH	MCA	MOCP	WEIGHT LBS	MIN. SEER	TRANE MODEL SERIES	MIN CAP (MBH) TOTAL	SENS	AMB DB	ENTERING DB	ENTERING WB	TRANE MODEL SERIES	
1	HORIZONTAL	600	90	0.6	1/2	120	1	7.9	15	60	40	14.5	2	150	S9V2B	1	9.0	R410A	1	0.6	208	1	12.0	20	175	14	4TTR4	17.8	14.2	105	78	65	4TXCB	1,2,3,4,5,6,7,8,9,10,11
2	HORIZONTAL	1,000	150	0.6	1/2	120	1	7.9	15	60	40	28.9	2	150	S9V2B	1	9.0	R410A	1	0.77	208	3	12.0	20	200	14	4TTA4	34.0	25.0	105	79	66	4TXCB	1,2,3,4,5,6,7,8,9,10,11
3	HORIZONTAL	1,600	240	0.6	3/4	120	1	10.8	15	60	60	38.6	2	150	S9V2B	1	13.8	R410A	1	1.05	208	3	18.0	30	200	14	4TTA4	43.0	38.0	105	77	65	4TXCB	1,2,3,4,5,6,7,8,9,10,11
4	HORIZONTAL	800	200	0.6	1/2	120	1	7.9	15	60	40	19.3	2	150	S9V2B	1	10.1	R410A	1	0.9	208	1	14.0	20	175	14	4TTR4	19.1	12.2	105	80	68	4TXCB	1,2,3,4,5,6,7,8,9,10,11

REMARKS:

1. FUEL FOR FURNACE SHALL BE NATURAL GAS.
2. EXTERNAL STATIC PRESSURE ("WG") INCLUDES DUCTWORK, BALANCING DAMPERS AND AIR DEVICES ONLY.
3. SIZE, ROUTE, INSULATE AND PROVIDE APPURTENANCES FOR DX PIPING SYSTEMS, IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
4. LISTED CAPACITIES ARE FOR THE AIR HANDLER UNIT AND CONDENSER UNIT COMBINATION. UNITS SHALL PERFORM TO LISTED CAPACITIES.
5. TRANE IS THE BASIS FOR DESIGN. ACCEPTABLE MANUFACTURER'S ARE: YORK, CARRIER, AAON. CONTRACTOR IS RESPONSIBLE FOR VARIATIONS FROM DESIGN BASIS IN FIT AND ELECTRICAL SERVICE.
6. SEER / EER RATINGS ARE AT ARI CONDITIONS FOR CONDENSING UNIT ONLY.
7. PROVIDE FILTER DRYER AND SIGHT GLASS ON THE DX LINES.
8. PROVIDE FILTER RACK, PLACE AND ORIENT FOR EASY FILTER ACCESS.
9. FOR LONG DX LINE RUNS, USE MANUFACTURER'S PUBLISHED LONG LINE INSTALLATION GUIDELINES.
10. PROVIDE WITH FACTORY, WALL MOUNTING, PROGRAMMABLE 7-DAY/2-EVENT THERMOSTAT.
11. MINIMUM 80-PERCENT EFFICIENCY (AFUE) ON GAS FURNACE.
12. PROVIDE WITH FACTORY CONCENTRIC VENT KIT.

DX SPLIT SYSTEM SCHEDULE

MARK FCU- / CU-	INDOOR UNIT							CONDENSING UNIT									FCU COOLING PERFORMANCE DATA							REMARKS
	ARRANGEMENT	UNIT CFM	OUTDOOR AIR (CFM)	ESP (IN)	FLA	UNIT WT	LG MODEL SERIES	QUANTITY COMP	REF TYPE	QUANTITY FANS	POWER CONNECTION V	PH	MCA	MOCP	UNIT WT	LG MODEL SERIES	MIN CAP (MBH) TOTAL	SENS	AMB DB	ENTERING DB	ENTERING WB	MIN. SEER	
6,7	WALL MOUNT	300	--	0.1	0.2	20 LBS	LSN	1	R-410A	1	208	1	7.0	15	20 LBS	LSU	12.0	10.0	105	75	62.5	17.0	1,2,3,4,5,6,7,8,9,10,11,12

REMARKS:

1. INDOOR UNIT IS POWERED THROUGH OUTDOOR UNIT CIRCUIT.
2. SIZE, ROUTE, INSULATE AND PROVIDE APPURTENANCES FOR DX PIPING SYSTEMS, IN STRICT ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
3. LISTED CAPACITIES ARE FOR THE AIR HANDLER UNIT AND CONDENSER UNIT COMBINATION. UNITS SHALL PERFORM TO LISTED CAPACITIES.
4. LG IS THE BASIS OF DESIGN. ACCEPTABLE MANUFACTURERS ARE: MITSUBISHI, FREIDRICH, DAIKIN, CARRIER.
5. SEER / EER. RATINGS ARE AT ARI CONDITIONS FOR CONDENSING UNIT ONLY.
6. PROVIDE FILTER DRYER AND SIGHT GLASS ON THE DX LINES.
7. PROVIDE LITTLE GIANT EC-OP-K CONDENSATE PUMP PACKAGE
8. PROVIDE FACTORY PROGRAMMABLE THERMOSTAT 7-DAY, 2-EVENT.
9. COORDINATE OUTDOOR UNIT MOUNTING REQUIREMENTS AND ROOF PENETRATIONS.
10. PROVIDE FACTORY CONDENSER COIL HAIL GUARDS
11. UNITS SHALL BE PROVIDED WITH TXV VALVES
12. FOR LONG DX RUNS, USE MANUFACTURER'S RECOMMENDED LONG LINE INSTALLATION GUIDELINES

FAN SCHEDULE

MARK EF-	TYPE	LOCATION	CFM	EXT. SP IN WG	MOTOR DATA HP	VOLTS	PH	DRIVE	MAX SONES	WEIGHT	MANUFACTURER/ MODEL SERIES	REMARKS
1,2,3	CEILING	TOILET	70	0.5	1/8	120	1	DIRECT	10.0	20	LOREN-COOK/GC	1,3,4,8
4	CENTRAL FAN	APP BAY	-	-	5	208	3	-	30.0	225	PLYMOVENT/TEV	1,2,8
5	IN-LINE	MEZZANINE	1,000	0.5	1/6	120	1	DIRECT	15.0	100	LOREN COOK/SQND	1,2,5,8
6	IN-LINE	APP BAY	4,500	1	2	208	3	DIRECT	15.0	120	LOREN COOK/SQND	1,2,6,8
7	ROOF UPBLAST	ROOF	600	1.5	1/2	208	1	DIRECT	15.0	100	CAPTIVEAIRE	1,7,9,10,11,12,13

REMARKS:

1. OR APPROVED EQUAL.
2. PROVIDE FACTORY MOUNTED HARDWARE FOR SUSPENSION FROM BUILDING STRUCTURE INCLUDING SPRING HANGER ISOLATORS.
3. PROVIDE CEILING FIRE DAMPER AND INTEGRAL METAL GRILLE.
4. INTERLOCK START-STOP WITH LIGHT SWITCH.
5. PROVIDE FACTORY 7-DAY TIMECLOCK FOR CONTINUOUS FAN OPERATION DURING OCCUPIED HOURS.
6. FAN RUNS CONTINUOUSLY.
7. PROVIDE WITH FACTORY ROOF CURB - BOTTOM SLOPED TO MATCH ROOF PITCH.
8. PROVIDE WITH INTEGRAL DISCONNECT, GRAVITY BACKDRAFT DAMPER, AND ALUMINUM BIRDSCREEN.
9. KITCHEN HOOD EXHAUST FAN. REFER TO CONTROLS DIAGRAM ON M6.02.
10. PROVIDE GREASE CAPTURE AND CONTAINMENT SYSTEM.
11. PROVIDE WITH COMBINATION STARTER/DISCONNECT WITH NEMA 3R ENCLOSURE.
12. PROVIDE WITH MOTORIZED BACKDRAFT DAMPER.
13. FAN SHALL BE UL705 AND UL762 RATED.

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STATE OF TEXAS
11/11/2019
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264.11.11.2019.19024

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Texas Registration # F-10963

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

HVAC SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	M0.02

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AIR DEVICE SCHEDULE

MARK	SERVES	NECK SIZE	FACE SIZE	MOUNTING	TYPE	MATERIAL	MAXIMUM NC	DESIGN BASIS MANUFACTURER/ MODEL SERIES	REMARKS
A	SUPPLY	6,8,10,12,14	24" x 24"	CEILING	LOUVERED	STEEL	30	TITUS/TDC	1,2,3
B	SUPPLY	6,8,10	12" x 12"	CEILING	LOUVERED	STEEL	30	TITUS/TDC	1,2,3
C	SUPPLY	10" x 6"	12" x 8"	SIDEWALL	AEROBLADE	STEEL	30	TITUS/272RS	2
H	RETURN/EXHAUST	VARIES	24" x 24"	CEILING	PERFORATED	STEEL	30	TITUS/PAR	1,2,3
K	RETURN/EXHAUST	10" x 10"	12" x 12"	CEILING	PERFORATED	STEEL	30	TITUS/PAR	1,2,3
L	RETURN/EXHAUST	10" x 6"	12" x 8"	SIDEWALL	AEROBLADE	STEEL	30	TITUS/23RS	2

REMARKS:

1. PROVIDE MOUNTING FRAME TO BE COMPATIBLE WITH TYPE OF CEILING IN WHICH THE DEVICE IS TO BE MOUNTED. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING TYPES.
2. PROVIDE WHITE BAKED ENAMEL FINISH.
3. WHERE ROUND NECK SIZE IS NOTED ON DUCTWORK PLAN, PROVIDE RECTANGULAR TO ROUND DUCT COLLAR.

LOUVER SCHEDULE

MARK - WL	SERVES	MATERIAL	CFM (FREE AREA-SQ-FT)	EXT. S.P. IN. W.G.	WIDTH IN.	HEIGHT IN.	MANUFACTURER	REMARKS
1,2,3	INTAKE	ALUMINUM	1500	0.08	32	32	POTTORFF EOD	1,2,3,4,5,6
4	EXHAUST	ALUMINUM	2000	0.08	32	32	POTTORFF EFD	1,4,5,7
5	INTAKE	ALUMINUM	(0.5)	0.08	18	18	POTTORFF XAV545	1,2,4,5,8
6	INTAKE	ALUMINUM	1000	0.08	26	26	POTTORFF EFD	1,4,5,7
7	EXHAUST	ALUMINUM	1000	0.08	26	36	POTTORFF EFD	1,4,5,7
8	EXHAUST	ALUMINUM	4500	0.08	144	36	RUSKIN ELT(ELFX375DX)	1,3,4,5,9
9	INTAKE	ALUMINUM	1200	0.08	72	18	RUSKIN ELT(ELFX375DX)	1,3,4,5,9

1. OR APPROVED EQUAL
2. PROVIDE 120 VAC TWO-POSITION MOTORIZED DAMPER FULL SIZE OF LOUVER BEHIND LOUVER.
3. PROVIDE EXTRUDED ALUMINUM, 6" DRAINABLE OPERABLE WALL LOUVER WITH INSECT SCREEN.
4. PROVIDE LOUVER WITH ANODIZED FINISH, COORDINATE COLOR WITH ARCHITECT
5. PROVIDE WITH EXTENDED SILL.
6. INTERLOCK ACTUATOR WITH EF-6. ACTUATOR SHALL OPEN DAMPER WHEN EXHAUST FAN IS ON AND SHALL CLOSE DAMPER WHEN EXHAUST FAN IS OFF.
7. PROVIDE WITH INSECT SCREEN.
8. INTERLOCK DAMPER WITH RED MUSHROOM PUSH BUTTON. DAMPER SHALL BE NORMALLY CLOSED AND OPEN IN THE EVENT THAT THE PUSH BUTTON IS ACTIVATED OR THE BUILDING LOSES POWER.
9. PROVDE TRIANGULAR SHAPED LOUVER.

GAS RADIANT HEATER (HIGH INTENSITY) SCHEDULE

MARK IR-	SERVES	TYPE	CAPACITY (MBH)		STAGES	MOTOR DATA			DESIGN BASIS REZNOR
			INPUT	OUTPUT		FLA	VOLTS	PH	MODEL SERIES
1	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH
2	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH
3	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH
4	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH
5	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH
6	APPARATUS BAY	HIGH INTENSITY	100	85	2	1.7	120	1	RIH

REMARKS:

1. FUEL SOURCE IS NATUAL GAS.
2. CERAMIC HEATING ELEMENT WITH STANDARD POLISHED ALUMININUM REFLECTOR.
3. UNITS SHALL BE CSA RATED FOR COMMERCIAL/INDUSTRIAL USE.
4. 15-FEET MINIMUM MOUNTING HEIGHT.
5. DOUBLE-STAGE BURNER.
6. COORDINATE WITH ELECTRICAL FOR DIRECT WIRED ELECTRICAL CONNECTION.
7. PROVIDE WITH MOUNTING HARDWARE FOR SUSPENSION FROM ROOF STRUCTURE.
8. MOUNT AT 20-DEGREE ANGLE; 30-DEGREES MAXIMUM ANGLE FROM HORIZONTAL.
9. PROVIDE FACTORY LINE VOLTAGE THERMOSTAT - HEAVY DUTY FOR INDUSTRIAL APPLICATION.

REVISIONS

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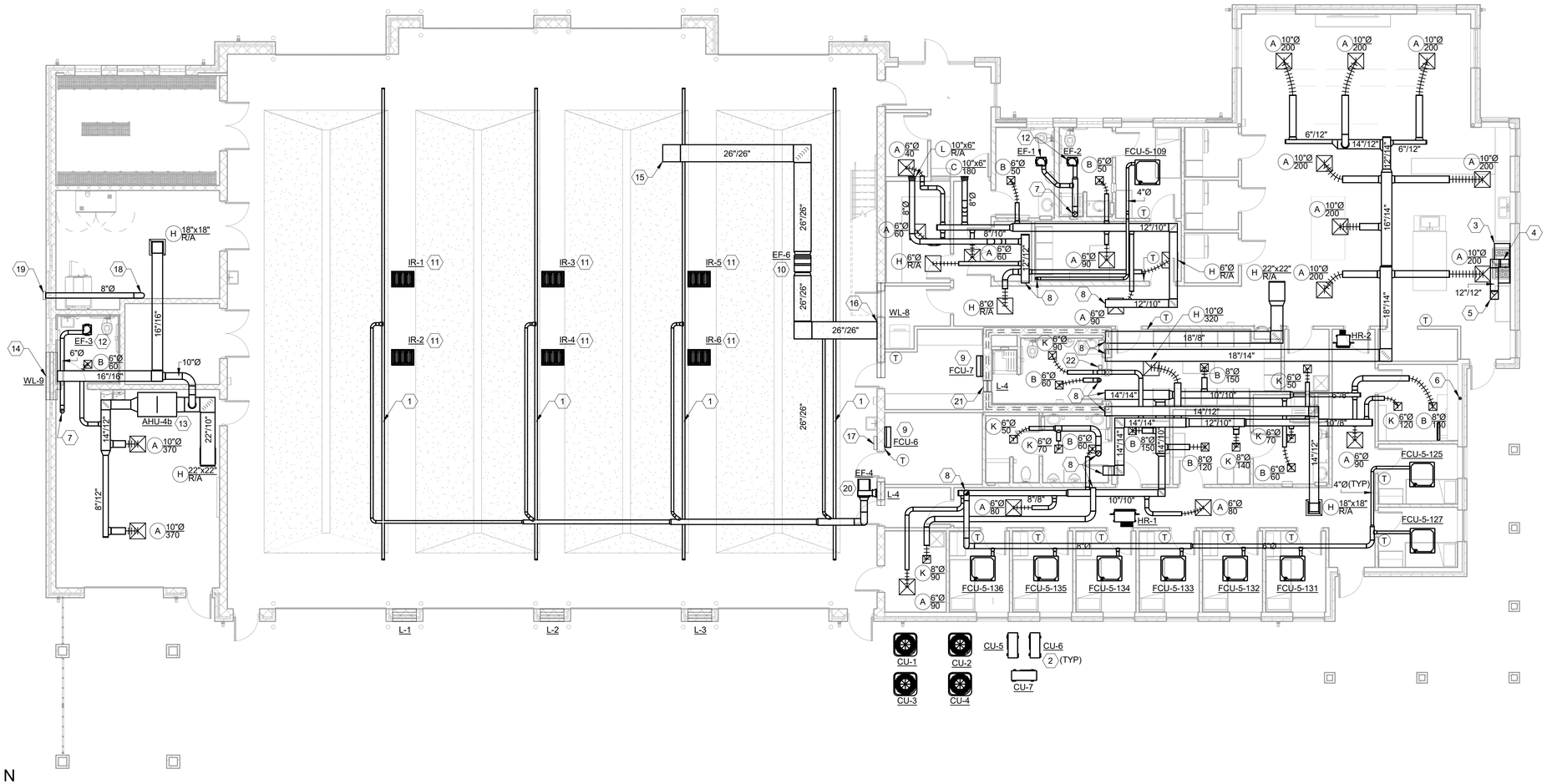
HVAC SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	M0.03

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M2.01 NOTES BY SYMBOL

NUMBER	NOTE
1	DRIVE THRU VEHICLE TAILPIPE EXHAUST SYSTEM ASSEMBLY WITH (1) HOSE DROP. PLYMOVENT;STR OR APPROVED EQUAL.
2	TYPICAL CONDENSING UNIT. REFER TO DETAILS 9/M6.01 AND 10/M6.01 FOR ADDITIONAL INFORMATION.
3	COMMERCIAL GRADE TYPE I HOOD. CAPTIVAIRE OR APPROVED EQUAL.
4	12/12-INCH EXAUST DUCT DOWN TO KITCHEN HOOD.
5	12/12-INCH EXHAUST DUCT UP TO KITCHEN EXHAUST FAN ON ROOF. TRANSITION TO FULL SIZE OPENING AS REQUIRED.
6	4-INCH DRYER EXHAUST DUCT UP FROM DRYER VENT BOX UP TO ROOF. ROUTE EXHAUST DUCT IN ACCORDANCE WITH DRYER MANUFACTURER'S INSTRUCTIONS.
7	6-INCH/8-INCH EXHAUST DUCT UP TO ROOF. REFER TO DETAIL 4/M6.01 FOR ADDITIONAL INFORMATION.
8	REFER TO M2.02 FOR CONTINUATION.
9	TYPICAL DUCTLESS SPLIT SYSTEM. REFER TO DETAIL 3/M6.01 FOR ADDITIONAL INFORMATION.
10	TYPICAL INLINE EXHAUST FAN. REFER TO DETAIL 7/M6.01 FOR ADDITIONAL INFORMATION.
11	TYPICAL HIGH INTENSITY GAS-FIRED RADIANT HEATER. REFER TO DETAIL 1/M6.02 FOR ADDITIONAL INFORMATION.
12	TYPICAL CEILING MOUNTED EXHAUST FAN. REFER TO DETAIL 6/M6.01 FOR ADDITIONAL INFORMATION.
13	TYPICAL AIR HANDLING UNIT. REFER TO DETAIL 1/M6.01 FOR ADDITIONAL INFORMATION.
14	16/16-INCH OUTDOOR AIR DUCT INTO WALL LOUVER. TRANSITION TO FULL SIZE OPENING OF LOUVER AS REQUIRED.
15	TURN DOWN 90-DEGREES AND TERMINATE DUCT. COVER OPENING WITH TYPE 304 STAINLESS STEEL BIRD SCREEN.
16	26/26-INCH EXHAUST DUCT INTO WAL LOUVER. TRANSITION TO FULL SIZE OPENING AS REQUIRED.
17	VEHICLE EXHAUST EXTRACTION CONTROL PANEL. COORDINATE FINAL LOCATION WITH OWNER (VIA ARCHITECT) PRIOR TO INSTALLATION.
18	8-INCH EXHAUST DUCT FROM DRYER. INSTALL PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
19	TERMINATE 8-INCH DRYER EXHAUST DUCT WITH MANUFACTURER'S WALL CAP. MOUNT AT 12-FT ABOVE FINISH FLOOR. INSTALL PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
20	MOUNT EXHAUST FAN 21-FEET ABOVE FINISHED FLOOR.
21	FEMA RATED WALL LOUVER WITH DUAL POSITION OPPOSED BLADE DAMPER SECTION.
22	RED MUSHROOM PUSH BUTTON WITH NON-LOCKABLE ACCESS COVER FOR PROTECTION AGAINST ACCIDENTAL ACTIVATION.



N

1 M2.01 FLOOR PLAN - HVAC
1/8" = 1'-0"

8' 0' 8' 16'
1/8" = 1'-0"

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MANSFIELD FIRE STATION NO. 5

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FLOOR PLAN - HVAC

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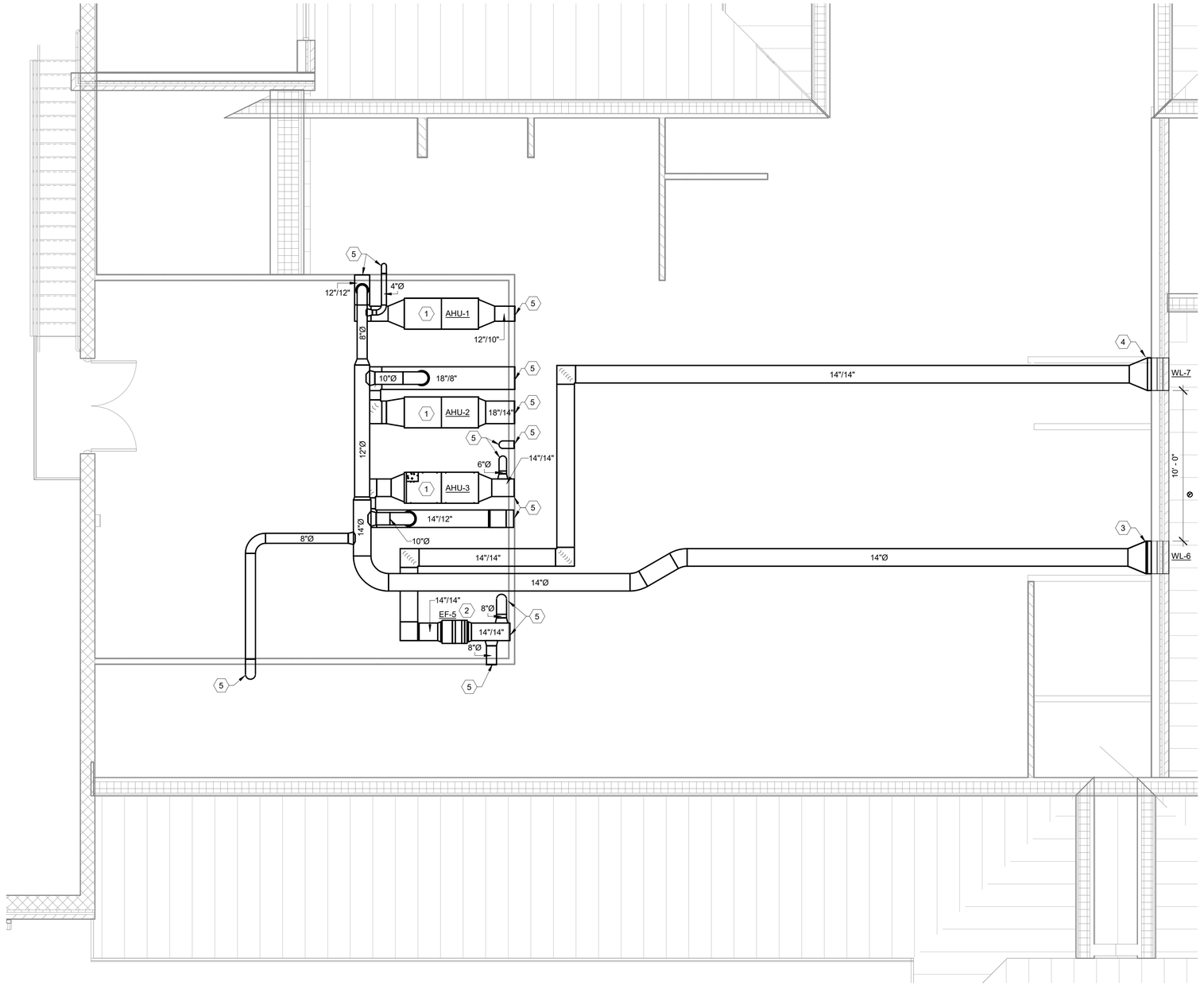
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DATE:	11/11/2019
SHEET:	M2.01

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M2.02 NOTES BY SYMBOL	
NUMBER	NOTE
1	TYPICAL AIR HANDLING UNIT. REFER TO DETAIL 1/M6.01 FOR ADDITIONAL INFORMATION.
2	TYPICAL INLINE EXHAUST FAN. REFER TO DETAIL 7/M6.01 FOR ADDITIONAL INFORMATION.
3	14" OUTDOOR AIR DUCT INTO WALL LOUVER. TRANSITION TO FULL SIZE OPENING AS REQUIRED.
4	14/14-INCH EXHUAST DUCT INTO WALL LOUVER. TRANSITION TO FULL SIZE OPENING AS REQUIRED.
5	REFER TO M2.01 FOR CONTINUATION.



N

1 M2.02 MEZZANINE PLAN - HVAC
1/4" = 1'-0"

4' 0' 4' 8'
1/4" = 1'-0"

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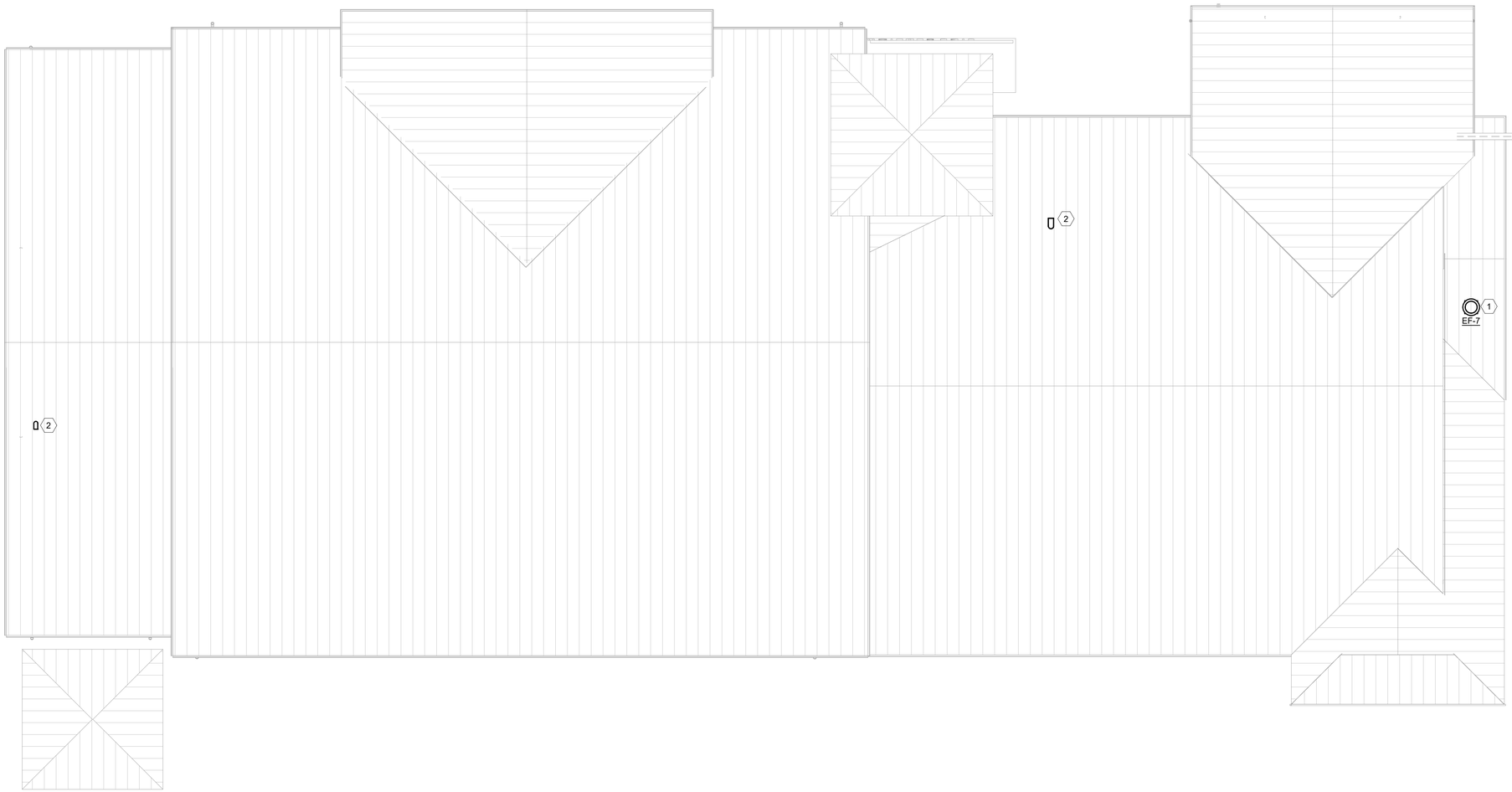
MANSFIELD FIRE STATION NO. 5
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Mansfield, Texas 76063
MEZZANINE PLAN - HVAC

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	M2.02

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M2.03 NOTES BY SYMBOL

NUMBER	NOTE
1	TYPICAL ROOF UPBLAST EXHAUST FAN. REFER TO DETAIL 8/M6.01 FOR ADDITIONAL INFORMATION.
2	6-INCH/8-INCH EXHAUST DISCHARGE.



N

1 M2.03 ROOF PLAN - HVAC
1/8" = 1'-0"

8' 0' 8' 16'
1/8" = 1'-0"

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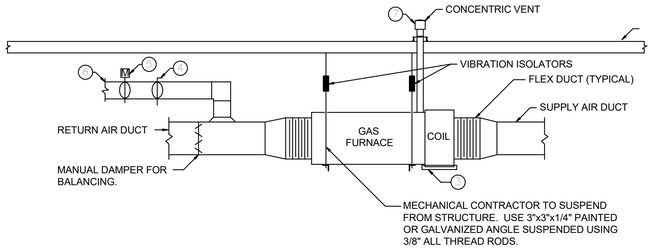
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ROOF PLAN - HVAC

SHEET SIZE:	22 x 34
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SHEET:	M2.03

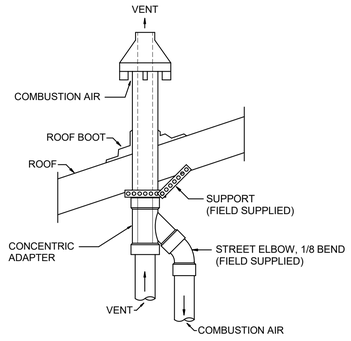
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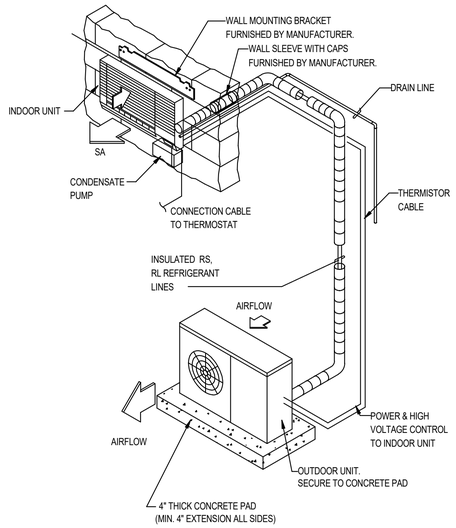
NOTES FOR DETAIL:

1. SIZE AND LOCATE OUTSIDE AIR INTAKE AS SHOWN ON FLOOR PLAN, BALANCE ACCORDING TO SCHEDULED OUTSIDE AIR.
2. SEAL ROOF AND WALL PENETRATIONS WEATHER TIGHT.
3. AUXILIARY DRAIN PAN. CONTRACTOR SHALL PROVIDE AND INSTALL A WATER SENSING DISK IN DRAIN PAN. DISK SHALL BE INTERLOCKED WITH AIR HANDLER UNIT STARTER TO TURN OFF AIR HANDLER UNIT WHEN DRAIN PAN FILLS WITH CONDENSATE. DISK SWITCH SHALL BE WIRED THROUGH AN INTERPOSING RELAY TO THE STARTER CIRCUIT.
4. MANUAL DAMPER, BALANCE O/A AS SCHEDULED.
5. MOTORIZED DAMPER. INTERLOCK WITH FURNACE FAN MOTOR TO OPEN WHEN FAN MOTOR IS ENERGIZED,
5. O/A INTAKE DUCT. CONNECT TO MAIN O/A SERVING AHUS ON 2ND FLOOR. REFER TO PLANS FOR SIZE AND ROUTING OF DUCT.
5. CONCENTRIC VENT THROUGH ROOF. REFER TO DETAIL 2/M6.01 FOR ADDITIONAL INFORMATION.

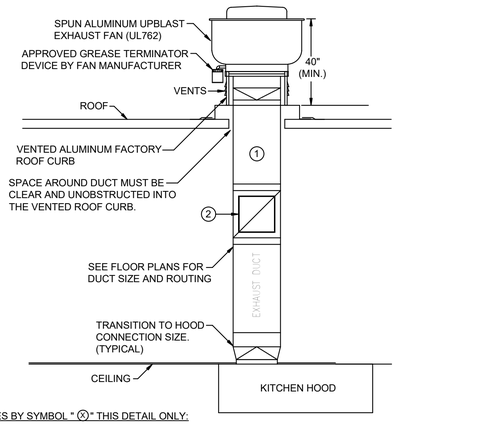
1 TYPICAL SUSPENDED GAS FURNACE WITH DX COIL, DUCT O/A
SCALE: NO SCALE



2 TYPICAL CONCENTRIC VENT DETAIL
SCALE: NO SCALE



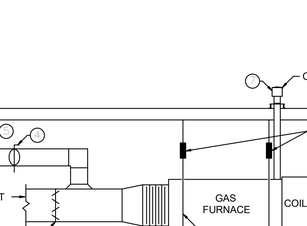
3 TYPICAL DUCTLESS SPLIT SYSTEM
SCALE: NO SCALE



NOTES BY SYMBOL " ⓧ " THIS DETAIL ONLY:

1. WELDED BLACK STEEL RECTANGULAR OR SQUARE DUCT. ALL SECTIONS OF THE DUCT SYSTEM SHALL BE CONSTRUCTED AND INSTALLED WITHOUT FORMING DIPS AND TRAPS AND SHALL SLOPE NOT LESS THAN 1/4 INCH PER FOOT TOWARD THE HOOD. WRAP WITH FIRE PROOFING INSULATION (3M OR EQUAL). THICKNESS/LAYER AS REQUIRED TO MEET 2-HOUR FIRE PROTECTION RATING.
2. ACCESS FOR CLEAN-OUT AND INSPECTION SHALL BE PROVIDED AT EACH CHANGE IN DIRECTION OF THE SYSTEM AND AS OTHERWISE REQUIRED. NOTE: THE PLAN MAY REQUIRE MORE THAN IS SHOWN HERE (VERTICAL SHOWN FOR REFERENCE ONLY).

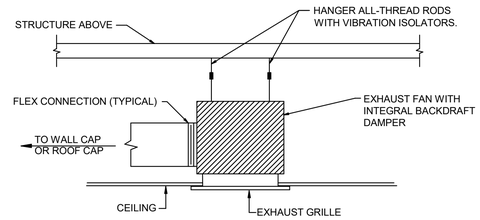
4 TYPICAL KITCHEN HOOD DUCT SYSTEM
SCALE: NO SCALE



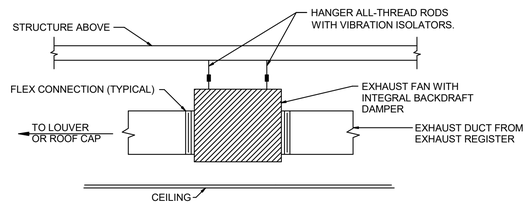
NOTES:

1. MOUNT DUCT CONNECTION HEIGHT AT DRYER OUTLET HEIGHT.

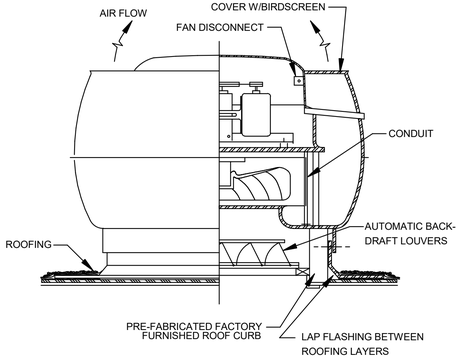
5 TYPICAL DRYER VENT BOX DETAIL
SCALE: NO SCALE



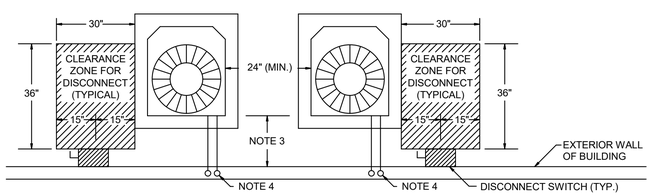
6 TYPICAL CEILING EXHAUST FAN DETAIL
SCALE: NO SCALE



7 TYPICAL SUSPENDED INLINE EXHAUST FAN
SCALE: NO SCALE



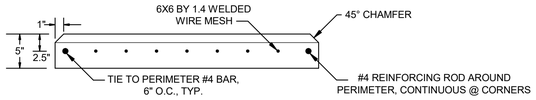
8 TYPICAL UPBLAST ROOF EXHAUST FAN
SCALE: NO SCALE



NOTES FOR DETAIL:

1. TOP DISCHARGE AREA SHOULD BE UNRESTRICTED FOR AT LEAST FIVE (5) FEET ABOVE UNIT. UNIT SHOULD BE PLACED SO ROOF RUN-OFF WATER DOES NOT POUR DIRECTLY ON UNIT.
2. UNIT SHOULD BE UNOBSTRUCTED FOR 12" (MIN.) ON ANY SIDE AND IN FRONT.
3. 12" (MIN) IF THE DISCONNECT SWITCH IS OFF TO THE SIDE OF UNIT. DISCONNECT SWITCH MAY BE PLACED BEHIND UNIT, IN THIS CASE THIS DIMENSION FROM THE FRONT OF THE DISCONNECT SWITCH TO THE BACK OF THE UNIT CAN BE NO SMALLER THAN 36" FOR 208 V. AND 42" FOR 480 V. UNITS.
4. REFRIGERANT PIPING TO RUN IN WALL UP TO MECHANICAL SPACE AND TO AIR HANDLER UNIT. SEAL WALL PENETRATION WEATHER TIGHT.
5. CONTROL WIRING TO CONDENSATE UNITS SHALL BE IN CONDUIT.

9 TYPICAL CONDENSING UNIT CLEARANCES DETAIL
SCALE: NO SCALE



NOTES:

1. PAD SHALL EXTEND BEYOND EQUIPMENT 12" (MIN.) IN ALL DIRECTIONS.
2. CONCRETE SHALL BE 2800 PSI TEST @ 28 DAYS, MIN.

10 TYPICAL SECTION THROUGH CONDENSING UNIT CONCRETE PAD DETAIL
SCALE: NO SCALE

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Texas Registration # F-10963

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

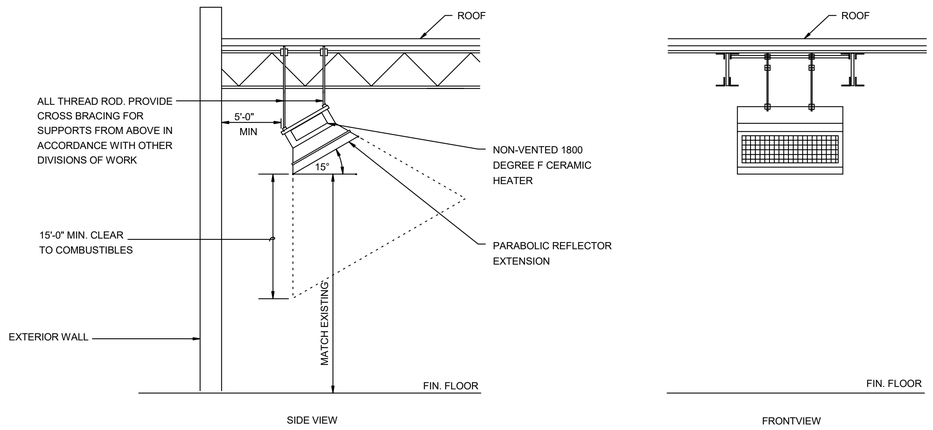
MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

HVAC DETAILS

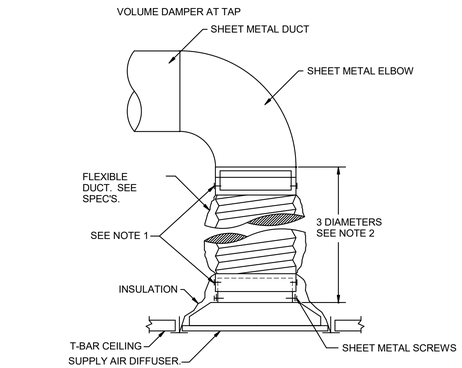
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	M6.01

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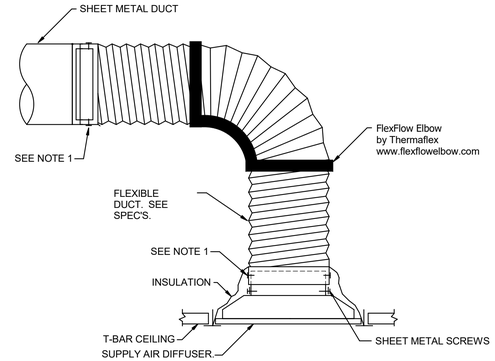
1 HIGH-INTENSITY GAS FIRED RADIANT HEATER

SCALE: NO SCALE



NOTES:

1. USE PLENUM COLLARS TO ATTACH FLEXIBLE DUCT . USE SHEET METAL SCREWS AND (2) WRAPS OF TAPE TO SECURE PLENUM COLLARS. ALTERNATE METHOD: BANDING DEVICE OR PANDUIT STRAP, IN LIEU OF SHEET METAL SCREWS. ALL TAPES AND SEALING MATERIALS SHALL COMPLY WITH UL181A FOR RIGID DUCT AND UL181B FOR FLEXIBLE DUCT.
2. SECURE SHEET METAL DROP TO DIFFUSER NECK WITH A MIN. OF (3) SHEET METAL SCREWS AND (2) FULL WRAPS OF TAPE PER UL REQUIREMENTS LISTED IN NOTE 1.
3. ALL FLEX DUCT SHALL BE INSTALLED WITHOUT KINKS, SAGGING, OR SHORT-RADIUS BENDS.

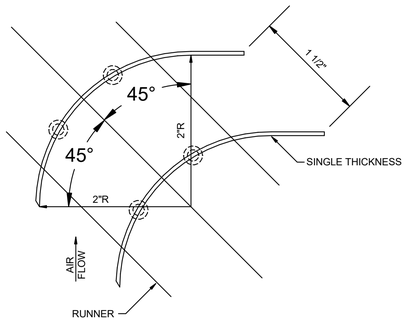


NOTES:

1. USE PLENUM COLLARS TO ATTACH FLEXIBLE DUCT . USE SHEET METAL SCREWS AND (2) WRAPS OF TAPE TO SECURE PLENUM COLLARS. ALTERNATE METHOD: BANDING DEVICE OR PANDUIT STRAP, IN LIEU OF SHEET METAL SCREWS. ALL TAPES AND SEALING MATERIALS SHALL COMPLY WITH UL181A FOR RIGID DUCT AND UL181B FOR FLEXIBLE DUCT.
2. IF A MINIMUM OF 2 DIAMETERS OF STRAIGHT RUN IS NOT AVAILABLE ABOVE THE REGISTER USE HARD DUCT SHORT RADIUS CONNECTION.
3. ALL FLEX DUCT SHALL BE INSTALLED WITHOUT KINKS, SAGGING, OR SHORT-RADIUS BENDS.

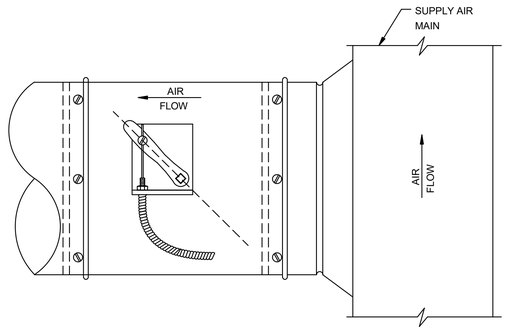
2 TYPICAL FLEXDUCT CONNECTIONS DETAIL

SCALE: NO SCALE



3 TYPICAL TURNING VANE DETAIL

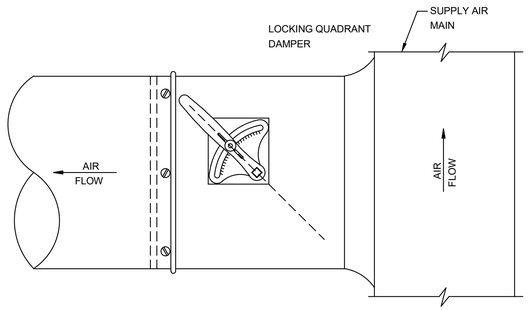
SCALE: NO SCALE



REQ'D AT EACH RUN-OUT TAP TO EVERY TERMINAL SUPPLY AIR DEVICE, AND OTHERWISE AS INDICATED.

4 TYPICAL CONICAL TAP WITH REMOTE DAMPER ACTUATOR SYSTEM DETAIL

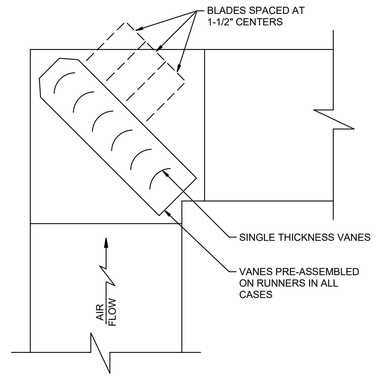
SCALE: NO SCALE



REQ'D AT EACH RUN-OUT TAP TO EVERY TERMINAL SUPPLY AIR DEVICE, AND OTHERWISE AS INDICATED.

5 TYPICAL CONICAL TAP WITH MANUAL DAMPER DETAIL

SCALE: NO SCALE

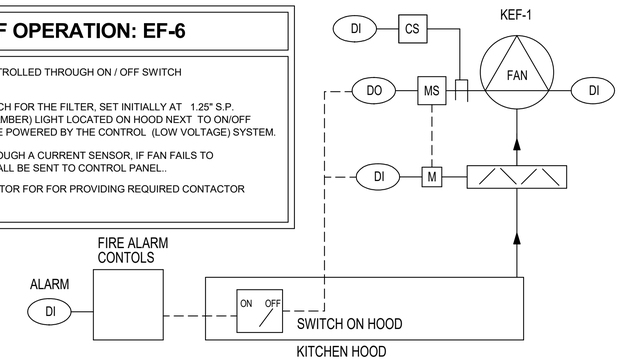


6 TYPICAL SQUARE ELBOW DETAIL

SCALE: NO SCALE

SEQUENCE OF OPERATION: EF-6

1. EXHAUST FAN OPERATION SHALL BE CONTROLLED THROUGH ON / OFF SWITCH LOCATED ON THE HOODS.
2. PROVIDE DIFFERENTIAL PRESSURE SWITCH FOR THE FILTER, SET INITIALLY AT 1.25" S.P. (ADJ.), TO ENERGIZE A "CHANGE FILTER" (AMBER) LIGHT LOCATED ON HOOD NEXT TO ON/OFF SWITCH. THE INDICATOR LIGHTS SHALL BE POWERED BY THE CONTROL (LOW VOLTAGE) SYSTEM.
3. FANS STATUS SHALL BE MONITORED THROUGH A CURRENT SENSOR, IF FAN FAILS TO OPERATE WHEN REQUIRED AN ALARM SHALL BE SENT TO CONTROL PANEL..
4. COORDINATE WITH FIRE ALARM CONTRACTOR FOR FOR PROVIDING REQUIRED CONTACTOR CONTROLS FOR FAN SHUTDOWN.



7 KITCHEN HOOD/EXHAUST FAN CONTROLS SEQUENCE OF OPERATIONS

SCALE: NO SCALE

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FIRE SPRINKLER SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

GENERAL NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.
3. EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.
5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.
7. THE CONTRACTOR SHALL PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE FIRE SPRINKLER EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.
8. THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF FIRE SPRINKLER EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.
9. SOME PIPES SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.
10. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.

ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LB	POUNDS
AHU	AIR HANDLING UNIT	LRA	LOCKED ROTOR AMPS
APPROX	APPROXIMATE	MAX	MAXIMUM
BD	BUILDING DRAIN (BELOW FLOOR)	MCA	MINIMUM CIRCUIT AMPACITY
		MIN	MINIMUM
B.F.G.	BELOW FINISHED GRADE	MSB	MOP SINK BASIN
BS	BUILDING SEWER (OUTSIDE OF BLDG)	N/A	NOT APPLICABLE
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CU	COPPER, CONDENSING UNIT		
CW	DOMESTIC COLD WATER	NFWH	NON-FREEZE WALL HYDRANT
D	EQUIPMENT DRAIN	N/O,N/C	NORMALLY OPEN, NORMALLY CLOSED
DCO	TWO-WAY GRADE CLEANOUT	O/C	ON CENTER
DEG	DEGREES	OFD	ROOF OVERFLOW DRAIN
DSN	DOWNSPOUT NOZZLE	PCO	PLUG CLEANOUT
(E)	EXISTING	PH	PHASE
EQUIP	EQUIPMENT	PROVIDE	FURNISH AND INSTALL
EWC	ELECTRIC WATER COOLER	PSI	POUNDS PER SQUARE INCH
°F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEANOUT	RE:	REFERENCE, REFER
FCU	FAN COIL UNIT	RLA	RUNNING LOAD AMPS
FD	FLOOR DRAIN	RM	ROOM
FS	FLOOR SINK	RPBFP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
FT.	FOOT, FEET		
FVC	FIRE VALVE CABINET	RPZ	REDUCED PRESSURE ZONE
G	NATURAL GAS	S	SINK
GCO	GRADE CLEANOUT	SD	STORM DRAIN (BELOW FLOOR)
GWH	NATURAL GAS WATER HEATER	ST	STORM WATER (ABOVE CEILING)
H	HEIGHT	SSD	SUBSURFACE DRAIN
HB	HOSE BIBB	THRU	THROUGH
HP	HORSEPOWER	TP	TRAP PRIMER
HW	DOMESTIC HOT WATER	TYP	TYPICAL
HWC	DOMESTIC HOT WATER CIRCULATION LOOP	U	URINAL
		UL	UNDERWRITERS LABORATORIES, INC.
HWTM	HOT WATER TEMPERATURE MAINTENANCE CABLE	V	SANITARY VENT
		VTR	SANITARY VENT THRU ROOF
HZ	HERTZ	W	SANITARY WASTE (ABOVE FLOOR)
IE	INVERT ELEVATION	WC	WATER CLOSET
IN.	INCH, INCHES	WCO	WALL CLEANOUT
J-BOX	JUNCTION BOX	W/	WITH
kW	KILOWATT	W/O	WITHOUT

LINE TYPES

SYMBOL	DESCRIPTION
—F—	FIRE PROTECTION MAIN WATER SUPPLY
—WP—	AUTOMATIC FIRE SPRINKLER (WET)
—FDC—	FIRE DEPARTMENT CONNECTION MAIN
—D—	INDIRECT DRAIN
——▶——	DIRECTION OF FLOW

VALVES AND FITTINGS

SYMBOL	DESCRIPTION
	SHUT-OFF / ISOLATION VALVE
	OS&Y GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	SUPERVISED VALVE (TYPE AS NOTED)
	PRESSURE REDUCING VALVE
	CHECK VALVE
	STRAINER
FS	FLOW SWITCH
	UNION (DIELECTRIC)
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (WALL)
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (FREE STANDING)
	PRESSURE GAUGE
	ALARM CHECK VALVE
	VALVE IN RISER
	END RISE (90° ELL)
	END DROP (90° ELL)
	RISE OR DROP
	TEE OUT OF TOP OF PIPE
	TEE OUT OF BOTTOM OF PIPE

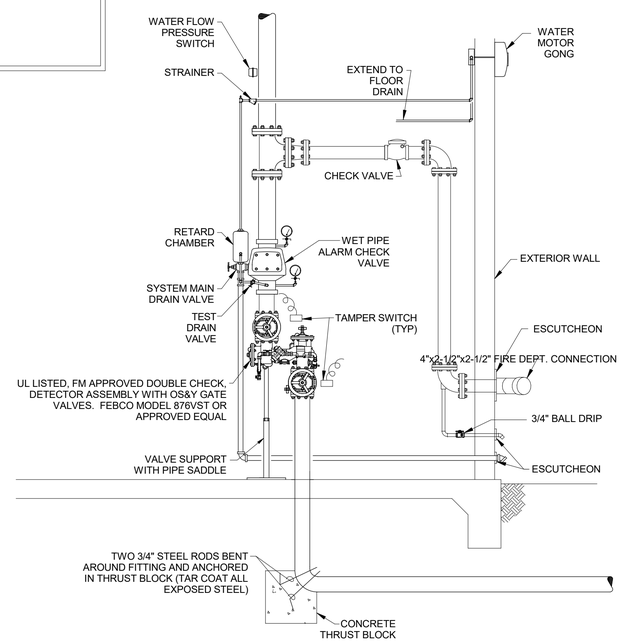
BASIS OF FIRE DESIGN

PRIMARY CODES:

FIRE PROTECTION: 2015 INTERNATIONAL FIRE CODE (WITH CITY AMENDMENTS)

FIRE SPRINKLER SYSTEM(s)

TYPES OF SYSTEMS IN PROJECT: WET PIPE SPRINKLER SYSTEM



NOTE: ALL UNDERGROUND BOLTS & NUTS SHALL BE STAINLESS STEEL
OWNER OR OWNERS REPRESENTATIVE TO INSPECT TRENCH AFTER THE INSPECTOR AND BEFORE THE TRENCH IS FILLED

1 FIRE SPRINKLER SYSTEM DETAIL
NO SCALE

FIRE PROTECTION GENERAL NOTES

1. PROVIDE A COMPLETE AND OPERABLE WET PIPE FIRE SUPRESSION SYSTEM FOR SPACES INSIDE THE BUILDING CONFORMING TO NFPA 13, LOCAL CODES AND ORDINANCES AND THE AUTHORITY HAVING JURISDICTION.
2. THE FIRE SUPRESSION SYSTEM SHALL CONFORM TO ALL APPLICABLE NFPA CODES IN ADDITION TO THE FOLLOWING:
   A. VELOCITIES IN MAINS SHALL NOT EXCEED 15 FEET PER SECOND.
   B. VELOCITIES IN BRANCHES AND BRANCH MAINS SHALL NOT EXCEED 20 FEET PER SECOND.
   C. HYDRAULIC CALCULATIONS SHALL SHOW THE ELEVATIONS OF INDIVIDUAL HEADS AND REFERENCE POINTS (NODES).
   D. HYDRAULIC CALCULATIONS SHALL DESCRIBE EACH INDIVIDUAL HEAD IN THE ZONE BEING CALCULATED. HYDRAULIC CALCULATIONS USING "K" FACTORS TO DESCRIBE WHOLE BRANCH LINES ARE NOT ACCEPTABLE.
   E. SUBMITTALS SHALL BE COMPLETE AND INCLUDE: HYDRAULIC CALCULATIONS, SHOP DRAWINGS AND MATERIAL SUBMITTAL.
3. SUBMITTALS NOT CONFORMING TO THE ABOVE WILL BE REJECTED WITH NO COMMENT.
4. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF SCHEDULE 40 BRANCH PIPING AND SCHEDULE 10 MAINS WITH DOMESTIC PRODUCED VICTAULIC 73-009N FIRELOCK EZ TYPE FITTINGS EXCEPT WHERE THE PIPING IS CONCEALED. WHERE THE PIPING IS CONCEALED OR INACCESSIBLE, ALL PIPING SHALL BE THREADED. GROOVED PIPE FITTINGS ARE PROHIBITED IN CONCEALED OR INACCESSIBLE AREAS. ACCESSIBLE AND CONCEALED ACCESSIBLE REQUIRES VISUAL AS WELL AS PHYSICAL ACCESS TO FITTINGS.
5. POWDER DRIVEN STUDS (SHOT STUDS) ARE NOT ALLOWED AS HANGER ANCHORS.
6. IN AREAS WITH CEILINGS, PROVIDE SEMI-RECESSED SPRINKLER HEADS WITH WHITE TRIM. IN ROOMS WITH NO CEILINGS THAT ARE EXPOSED TO THE PUBLIC, PROVIDE CHROME UPRIGHT SPRINKLER HEADS AND PAINT THE EXPOSED PIPE WHITE TO MATCH EXPOSED STRUCTURE, UNLESS DIRECTED OTHERWISE BY ARCHITECT. IN ROOMS WITH NO CEILINGS THAT ARE NOT EXPOSED TO THE PUBLIC , PROVIDE BRASS UPRIGHT SPRINKLER HEADS W/ HEAD GUARDS AS REQUIRED BY CODE.
7. THE FIRE DEPARTMENT CONNECTION AND TRIM SHALL HAVE A NICKEL FINISH UNLESS ANOTHER COLOR IS REQUIRED BY CODE.
8. ALL BURIED FITTINGS SHALL BE INSTALLED OUTSIDE THE BUILDING FOOTPRINT.
9. THIS FIRE MAIN WILL CONNECT TO A PRIVATE FIRE MAIN. NO RPZ IS NEEDED AT THE BUILDING
10. PROPERLY COAT ALL UNDERGROUND METALLIC FITTINGS WITH CORROSION-RESISTANT COMPOUNDS, MINIMUM STANDARD PER NFPA-13 AND MANUFACTURER'S INSTRUCTIONS. ENCIRCLE ALL METAL JOINTS IN POLYETHYLENE ENCASEMENT WRAP APPROPRIATE FOR THE APPLICATION.
11. ISOLATION VALVE PROPERLY INSTALLED, COATED AND WRAPPED.
12. PROVIDE CODE COMPLIANT THRUST BLOCKING. CONCRETE DUMPING IS PROHIBITED
13. PROVIDE A MAGNETIC TAPE ON TOP OF BURIED PIPING.
14. REFER TO CIVIL FOR PROPER BACKFILLING AND COMPACTION.
15. SPRINKLER HEADS SHALL BE INSTALLED IN THE CENTER OF THE CEILING TILE.
16. ALL UNDERGROUND FIRE PIPING SHALL BE INSPECTED END-TO-END BY FWISD MASTER PLUMBER AT THE FOLLOWING TIMES:
   A. IMMEDIATELY AFTER TAPPING INTO EXISTING 12" MAIN.
   B. IMMEDIATELY BEFORE INSTALLING POLYETHYLENE ENCASEMENT AROUND METALLIC FITTINGS.
   C. AFTER FIRE MARSHAL'S INSPECTION OF UNDERGROUND AND BEFORE BURYING PIPING OR JOINTS.

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FIRE SPRINKLER SYMBOLS AND ABBREVIATIONS

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FIRE PROTECTION PLAN NOTES

1. ELEVATOR SHAFTS AND ELEVATOR MACHINE ROOMS SHALL NOT BE SPRINKLED AS DIRECTED BY THE CITY OF FORT WORTH WITH FIRE DEPARTMENT AND SHALL NOT COMPROMISE THE RATING OF THE BUILDING AS BEING CONSIDERED FULLY SPRINKLED.
2. HATCH PATTERNS INDICATED ON THE FLOOR PLAN COINCIDE TO THE OCCUPANCY TYPES INDICATED ADJACENT TO SPRINKLER TYPES. CONTACTOR SHALL VERIFY EXTENTS OF EACH OCCUPANCY TYPE PRIOR TO DEVELOPING SPRINKLER SHOP DRAWINGS AND CALCULATIONS.

ORDINARY HAZARD GROUP 1 OCCUPANCY
WET PIPE UPRIGHT SPRINKLER
QUICK RESPONSE, STANDARD COVERAGE
DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.15 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 130 SQ.FT. 5.6K, 1/2" NPT, 155°F TEMPERATURE HEAD, BRASS FINISH HEAD (TYCO MODEL TY3131 OR EQUAL).



LIGHT HAZARD OCCUPANCY
WET PIPE UPRIGHT SPRINKLER
DESIGN TO 0.10 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 225 SQ. FT. PER HEAD. QUICK RESPONSE, STANDARD COVERAGE UPRIGHT, 5.6K, 1/2" NPT, 155°F, BRASS FINISH (TYCO MODEL TY3131 OR EQUAL) WITH PROTECTIVE METAL WIRE CAGE.

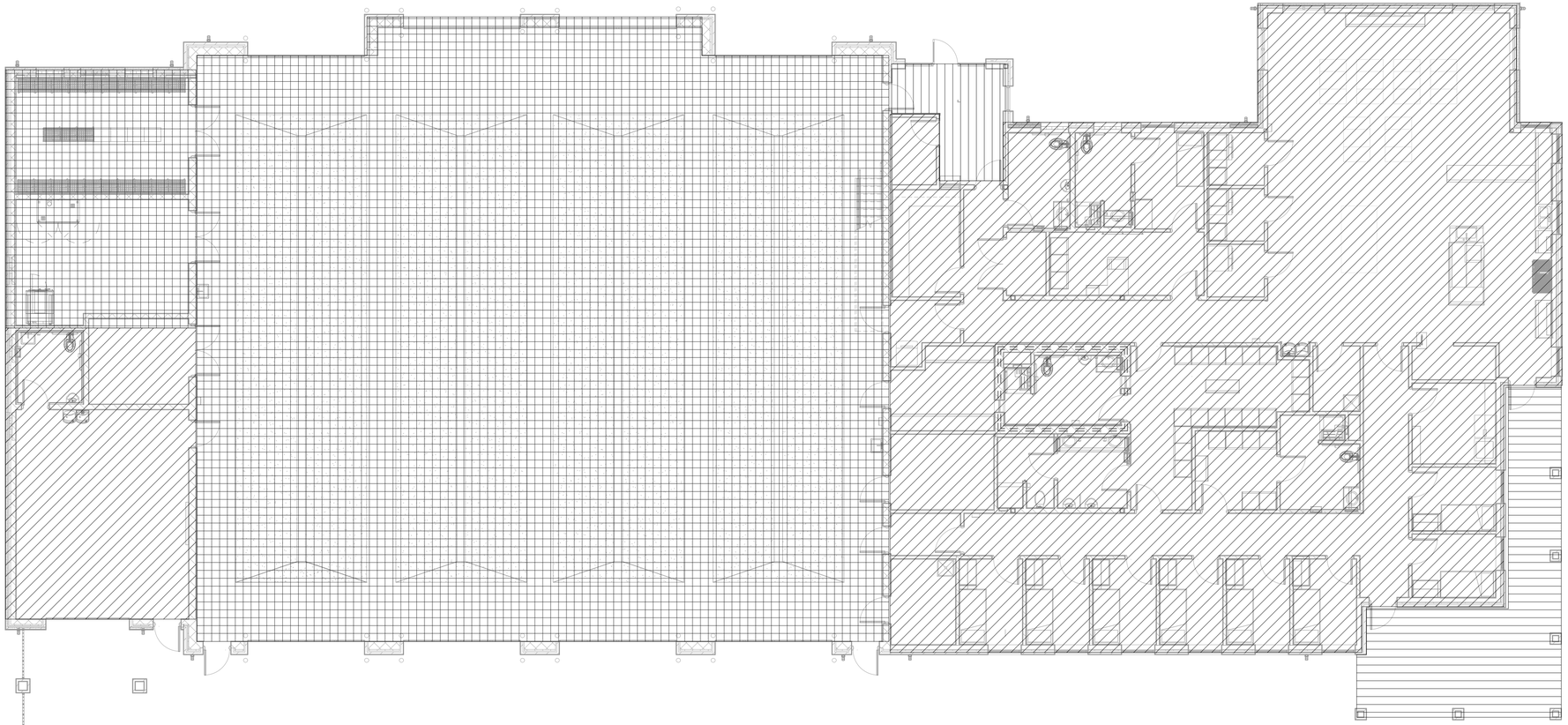


LIGHT HAZARD OCCUPANCY
WET PIPE RECESSED SPRINKLER
DESIGN TO 0.10 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 225 SQ. FT. PER HEAD. RECESSED PENDENT, QUICK RESPONSE, STANDARD COVERAGE, 5.6K, 1/2" NPT, 155°F HEAD, WHITE ESCUTCHEON AND WHITE HEAD (TYCO MODEL TY3231 OR EQUAL).



ORDINARY HAZARD GROUP 1 OCCUPANCY
DRY SIDEWALL SPRINKLER
QUICK RESPONSE, STANDARD COVERAGE
DESIGN TO 0.15 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 130 SQ. FT. PER HEAD. QUICK RESPONSE, STANDARD COVERAGE, DRY SIDEWALL, 5.6K, 1/2" NPT, 155°F, STAINLESS STEEL (TYCO MODEL TY3337 OR EQUAL).





1 FP2.01 FIRE PROTECTION PLAN
1/8" = 1'-0"

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PLUMBING SYMBOLS AND ABBREVIATIONS

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2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.

3. EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.

4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.

5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.

6. THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, SHOCK ABSORBERS, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.

7. THE CONTRACTOR SHALL PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE PLUMBING EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.

8. THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF PLUMBING EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.

9. PROVIDE VIBRATION ISOLATORS FOR MOTOR DRIVEN PLUMBING EQUIPMENT UNLESS NOTED OTHERWISE. PROVIDE ISOLATION AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

10. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL CLEANOUTS, ACCESS DOORS, ETC WITH THE ARCHITECT AND ALL OTHER TRADES PRIOR TO INSTALLATION. IF A CONFLICT WITH MILLWORK, LIGHT SWITCHES, WINDOWS, ETC EXISTS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE POTENTIAL INTERFERENCE PRIOR TO INSTALLATION.

11. PLUMBING VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 10 FEET FROM ALL OUTSIDE AIR INTAKES AND A MINIMUM OF 5 FEET FROM EXTERIOR PERIMETER WALLS.

12. SOME PIPES SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.

13. PLUMBING FIXTURES AND TRIM OF LIKE KIND SHALL BE OF THE SAME MANUFACTURER THROUGHOUT THE PROJECT. TYPICAL CATEGORIES INCLUDE THE FOLLOWING:

    A. WATER CLOSETS, LAVATORIES, URINALS
    B. ELECTRIC WATER COOLERS, DRINKING FOUNTAINS
    C. FAUCETS, MIXING VALVES
    D. TAIL PIECE, FIXTURE TRAPS, ESCUTCHEONS, ARM EXTENSIONS, STRAINERS
    E. FIXTURE CARRIERS, FLOOR DRAINS, FLOOR SINKS, ROOF DRAINS, OVERFLOW DRAINS
    F. COUNTER TOP SINKS

14. PROVIDE WATER HAMMER ARRESTERS BETWEEN THE NEXT TO LAST AND LAST FIXTURE AT EACH BATTERY OF PLUMBING FIXTURES IN ACCORDANCE WITH THE WATER HAMMER ARRESTER SCHEDULE AND THE PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-WH-201.

15. ALL SANITARY WASTE PIPING WITHIN THE BUILDING ENVELOPE SHALL HAVE MINIMUM SLOPES AS REQUIRED BY THE LOCAL CODE AUTHORITY. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS INDICATED ON FLOOR PLANS PRIOR TO INSTALLATION OF ANY SITE UTILITIES AND CONNECTION INTO EXISTING SERVICES.

16. COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE TEXAS ACCESSIBILITY'S STANDARD (TAS). PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES WITH FLUSH VALVE HANDLES LOCATED ON THE WIDE SIDE OF EACH STALL.

17. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.

18. ALL FLOOR DRAIN AND FLOOR SINK TRAPS SHALL USE TRAP PRIMERS.

19. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL NATURAL GAS UTILITY COMPANY TO EXTEND NATURAL GAS SERVICE TO LOCATION INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PAY ALL FEES AND COSTS ASSOCIATED/REQUIRED BY THE LOCAL GAS UTILITY COMPANY FOR THE EXTENSION OF THE GAS SERVICE. THE CONTRACTOR SHALL PROVIDE ALL PIPING, VALVES, ETC THAT ARE NOT PROVIDED BY THE LOCAL GAS UTILITY COMPANY AND THAT ARE REQUIRED FOR CONNECTION OF THE GAS METER AND REGULATOR(S) FOR A COMPLETE OPERATIONAL SYSTEM. THE CONTRACTOR SHALL VERIFY THE NATURAL GAS PRESSURE PROVIDED BY THE NATURAL GAS UTILITY COMPANY AND PROVIDE ADDITIONAL REGULATORS AS REQUIRED BY THE GAS FIRED EQUIPMENT INSTALLED.

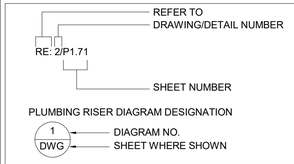
20. WELDED ALL GAS PIPING. THREADED JOINTS SHALL BE USED ONLY ON VALVES AND REGULATORS.

21. CONTRACTOR SHALL INSTALL NEW ISOLATION VALVES AT BRANCH CONNECTION TO EACH RESTROOM ON DOMESTIC HOT AND COLD WATER SUPPLY LINES. ACCESS PANELS TO BALL VALVE SHUT OFF SHALL BE INSTALLED AS REQUIRED BY GENERAL NOTE 7.

ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LB	POUNDS
AHU	AIR HANDLING UNIT	LRA	LOCKED ROTOR AMPS
AV	ACID VENT	MAX	MAXIMUM
AW	ACID WASTE	MCA	MINIMUM CIRCUIT AMPACITY
BD	BUILDING DRAIN (BELOW FLOOR)	MIN	MINIMUM
		MSB	MOP SINK BASIN
B.F.G.	BELOW FINISHED GRADE	N/A	NOT APPLICABLE
BS	BUILDING SEWER (OUTSIDE OF BLDG)	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DCW	DOMESTIC COLD WATER	NFWH	NON-FREEZE WALL HYDRANT
DHW	DOMESTIC HOT WATER	N/O.N/C	NORMALLY OPEN, NORMALLY CLOSED
DHWR	DOMESTIC HOT WATER CIRCULATION LOOP	O/C	ON CENTER
		OFD	ROOF OVERFLOW DRAIN
D	EQUIPMENT DRAIN	PCO	PLUG CLEANOUT
DI	DEIONIZED WATER	PH	PHASE
DCO	TWO-WAY GRADE CLEANOUT	PROVIDE	FURNISH AND INSTALL
DSN	DOWNSPOUT NOZZLE	PSI	POUNDS PER SQUARE INCH
(E)	EXISTING	RD	ROOF DRAIN
EQUIP	EQUIPMENT	RE:	REFERENCE, REFER
EWC	ELECTRIC WATER COOLER	RLA	RUNNING LOAD AMPS
°F	DEGREES FAHRENHEIT	RM	ROOM
FCO	FLOOR CLEANOUT	RPBFP	REDUCED PRESSURE PRINCIPLE
FCU	FAN COIL UNIT		BACKFLOW PREVENTER
FD	FLOOR DRAIN	RPZ	REDUCED PRESSURE ZONE
FS	FLOOR SINK	S	SINK
FT.	FOOT, FEET	SD	STORM DRAIN (BELOW FLOOR)
FVC	FIRE VALVE CABINET	ST	STORM WATER (ABOVE CEILING)
G	NATURAL GAS	SSD	SUBSURFACE DRAIN
GCO	GRADE CLEANOUT	THRU	THROUGH
GWH	NATURAL GAS WATER HEATER	TP	TRAP PRIMER
H	HEIGHT	TYP	TYPICAL
HB	HOSE BIBB	U	URINAL
HP	HORSEPOWER	UL	UNDERWRITERS LABORATORIES, INC.
HWTM	HOT WATER TEMPERATURE MAINTENANCE CABLE	V	SANITARY VENT
		VTR	SANITARY VENT THRU ROOF
HZ	HERTZ	W	SANITARY WASTE (ABOVE FLOOR)
IE	INVERT ELEVATION	WC	WATER CLOSET
IN.	INCH, INCHES	WCO	WALL CLEANOUT
J-BOX	JUNCTION BOX	W/	WITH
kW	KILOWATT	W/O	WITHOUT

DRAWING/DETAIL REFERENCE



VALVES AND FITTINGS

SYMBOL	DESCRIPTION
	SHUT-OFF / ISOLATION VALVE
	BALL VALVE
	BUTTERFLY VALVE
	GLOBE VALVE
	PLUG VALVE / GAS COCK
	CHECK VALVE
	STRAINER
	CALIBRATED BALANCING VALVE
R	GAS PRESSURE REGULATOR
	FLOW SWITCH
	UNION (DIELECTRIC)
	VALVE IN RISER
	END RISE (90° ELL)
	END DROP (90° ELL)
	RISE OR DROP
	TEE OUT OF TOP OF PIPE
	TEE OUT OF BOTTOM OF PIPE
	CAP ON END OF PIPE
WCO	WALL CLEANOUT
PCO	PLUG CLEANOUT
DCO	TWO WAY CLEANOUT
GCO	GRADE CLEANOUT
	NON-FREEZE WALL HYDRANT OR HOSE BIBB
FD	FLOOR DRAIN
FCO	FLOOR CLEANOUT
	SHUT-OFF / ISOLATION VALVE
	OS&Y GATE VALVE
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (WALL)
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (FREE STANDING)
	PRESSURE GAUGE
A	ALARM CHECK VALVE
D	DRY ALARM CHECK VALVE
D	DRY ALARM CHECK VALVE WITH QUICK OPENING DEVICE
	DELUGE OR PRE-ACTION ALARM CHECK VALVE

TYPICAL HANDICAPPED PLUMBING FIXTURE MOUNTING REQUIREMENTS

PLUMBING FIXTURE	MOUNTING REQUIREMENT PRE K	MOUNTING REQUIREMENT ELEMENTARY SCHOOL	MOUNTING REQUIREMENT ADULTS
WATER CLOSETS TOP OF SEAT	11" TO 12"	12" TO 15"	17" TO 19"
URINALS MAX TO BASIN OPENING	17" MAX.	17" MAX.	17" MAX.
LAVATORIES		31" MAX.	34" MAX.
GRAB BARS TO CENTER LINE	18" TO 20"	20" TO 25"	33" TO 36"
MAX TO TOP OF CONTROL DEVICES	20"-36"	18"-40"	15" - 48"
DRINKING FOUNTAINS AND MAX TO TOP OF BUBBLER	30" MAX.	32" MAX.	36"-43"

* DATA BASED UPON THE TEXAS ACCESSIBILITY STANDARDS (TAS).
VERIFY HEIGHTS AND CLEARANCES OF FIXTURES PRIOR TO PURCHASE OR INSTALLATION

WATER HAMMER ARRESTER SCHEDULE

P.D.I. SIZE	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

NOTES:
1. ALL WHA'S SHALL HAVE AN ACCESS PANEL.
2. SIZE AND LOCATE WATER HAMMER ARRESTERS IN ACCORDANCE WITH PDI PAMPHLET PDI-WH-201

BASIS OF PLUMBING DESIGN

PRIMARY CODES:
PLUMBING: 2018 INTERNATIONAL PLUMBING CODE (WITH CITY AMENDMENTS).
FUEL GAS: 2018 INTERNATIONAL FUEL GAS CODE (WITH CITY AMENDMENTS).
FIRE PROTECTION: 2018 INTERNATIONAL FIRE CODE (WITH CITY AMENDMENTS)

PROJECT DESIGN VALUES:

SANITARY SEWER AND VENT SYSTEM(s):
TOTAL DRAINAGE FIXTURES UNITS = 57 DFU

DOMESTIC WATER SYSTEM(s):
TOTAL WATER FIXTURE UNITS = 105 FU
PEAK DEMAND = 68 GPM

DOMESTIC HOT WATER SYSTEM(s):
STORED DOMESTIC HOT WATER TEMPERATURE = 140°F
TEMPERED DOMESTIC HOT WATER TEMPERATURE = 110°F
CIRCULATED DOMESTIC WATER SYSTEM

LINE TYPES

SYMBOL	DESCRIPTION
W	SANITARY SEWER (ABOVE CEILING)
BD	SANITARY SEWER (BELOW FLOOR, BUILDING DRAIN)
BS	SANITARY SEWER (OUTSIDE OF BUILDING, BUILDING SEWER)
GW	GREASY WASTE (ABOVE CEILING)
GD	GREASY WASTE (BELOW FLOOR)
D	EQUIPMENT DRAIN (ABOVE CEILING)
ST	STORM WATER PIPING (ABOVE CEILING)
SD	STORM WATER PIPING (BELOW FLOOR/GRADE)
OFD	OVERFLOW DRAIN (ABOVE CEILING)
SSD	SUBSURFACE DRAINAGE
	SANITARY VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER CIRCULATION
G	NATURAL GAS
FM	FORCE MAIN
SP	STANDPIPE FIRE PROTECTION WATER
WP	AUTOMATIC FIRE SPRINKLER (WET)
PA	AUTOMATIC FIRE SPRINKLER (PRE-ACTION)
DP	AUTOMATIC FIRE SPRINKLER (DRY)
A	COMPRESSED AIR
	DIRECTION OF FLOW
	DIRECTION OF PIPE SLOPE DOWN
	PIPE DEMOLITION

MISCELLANEOUS

1	DRAWING NOTE REFERENCE (I.E., NOTES BY SYMBOL)
	CONNECTION INTO EXISTING

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

SOLARE
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Texas Registration # F-10963

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

PLUMBING LEGENDS & NOTES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	P0.01

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REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY SCHEDULE

MARK	SERVICE	SIZE	FLOWRATE (GPM)	PRESSURE LOSS(PSIG)	MANUFACTURER AND MODEL NUMBER	REMARKS
RPZ1	DOMESTIC WATER	2-1/2"	0-80	0-15	WILKINS MODEL 475V	1

1. MOUNT AND SUPPORT FROM FLOOR WITH METAL STANDS. PROVIDE FUNNEL AND PIPE, SIZED PER THE MANUFACTURER'S RECOMMENDATIONS, ROUTE TO FLOOR SINK PROVIDING AN AIR GAP 2 TIMES THE SIZE OF PIPE.

DOMESTIC NATURAL GAS WATER HEATER SCHEDULE

MARK	SERVICE	TYPE	GAS INPUT (MBH)	STORAGE CAPACITY (GAL)	RECOVERY RATE (40° TO 120°) (GPH)	LEAVING WATER TEMPERATURE (°F)	ELECTRICAL CHARACTERISTICS AMPS	VOLTS	PHASE	HZ	MANUFACTURER AND MODEL NUMBER	REMARKS
WH1	DOMESTIC HOT WATER	NATURAL GAS	100	98	81	140	2	120	1	60	AO SMITH PCG-100	1 2 3

1. PROVIDE AIR INTAKE ASSEMBLY (ADAPTER ON BURNER ASSEMBLY) FOR DIRECT VENT CONNECTIONS (DUCTED COMBUSTION)
2. 6"Ø, TYPE "B" GAS VENT (VERIFY WITH MANUFACTURER FOR SIZE AND SPECIFIC ROUTING)
3. DIRECT VENT/SEALED COMBUSTION CONNECTIONS (DUCTED COMBUSTION). SIZE FLUE AND COMBUSTION AIR DUCTS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS

PUMP SCHEDULE

MARK	SERVICE	TYPE	FLOWRATE (GPM)	TOTAL DYNAMIC HEAD (FEET)	SPEED (RPM)	EFFIC. (%)	ELECTRICAL CHARACTERISTICS HP	VOLTS	PHASE	HZ	MANUFACTURER AND MODEL NUMBER	REMARKS
CP1	DOMESTIC HOT WATER CIRCULATION	INLINE, CENTRIFUGAL	2	10	1,725	65	1/12	115	1	60	TACO 100 SERIES	1 2

1. PROVIDE PUMP WITH AUTOMATIC DISCHARGE CONTROLLED BY INTERNAL PRESSURE SWITCH.
2. PROVIDE 7-DAY TIME CLOCK FOR OPERATION OF CIRCULATION PUMP (SET TO OPERATE BETWEEN 5:00 AM TO 9:00 PM, ADJUSTABLE).
3. PUMPS SHALL BE RATED FOR CONTINUOUS OPERATION AT WATER TEMPERATURES OF WATER SYSTEM
4. OR EQUAL.

THERMOSTATIC MIXING VALVE SCHEDULE

MARK	TYPE	FLOWRATE CAPACITY HIGH (GPM)	FLOWRATE CAPACITY LOW (GPM)	PRESSURE DROP (PSIG)	INLET HOT WATER TEMPERATURE (°F)	INLET COLD WATER TEMPERATURE (°F)	LEAVING WATER TEMPERATURE (°F)	MANUFACTURER AND MODEL NUMBER	REMARKS
TMV1	TEMPERED WATER - LAVATORIES	2.7	.25	15	110	60	95	LEONARD 270LF	1
TMV2	TEMPERED WATER - KITCHEN SINKS	7	0.5	15	110	60	95	LEONARD 370-LF-BV	1

1. PROVIDED WITH PAINTED, SURFACE MOUNT CABINET ASSEMBLY. VERIFY WITH ARCHITECTURAL SPECIFICATIONS FOR COLOR.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	ROUGH IN (MINIMUM) W	V	CW	HW	E	MANUFACTURER AND MODEL NUMBER	ADA /TAS
WC1	WATERCLOSET, ADA COMPLIANT, FLOOR MOUNT, FLUSHOMETER VALVE, TOP SPUD, ELONGATED, SIPHON ACTION JETTED BOWL, VITREOUS CHINA, WHITE, ASME A112.19.2M, 2" FULLY GLAZED TRAPWAY, 10" ROUGH-IN, 1.28 GPF	4"	2"	-	-	-	AMERICAN STANDARD, 3043.001; KOHLER, K-96057; ZURN, Z5665-BWL1; SLOAN, ST-2029.	
	FLUSHOMETER VALVE, 1.28 GPF, EXPOSED DIAPHRAGM-TYPE, CHROME PLATED, 1 1/2" TOP SPUD, SPUD COUPLING AND FLANGE, OSCILLATING NON-HOLD OPEN HANDLE, CHROME PLATED ANGLE STOP WITH STOP CAP, VACUUM BREAKER FLUSH CONNECTION, CAST WALL FLANGE WITH SET SCREW, ANSI/ASME 112.19.6	-	-	1 1/2"	-	-	SLOAN, 111-1.28; ZURN, Z6000AV-HET.	
	SEAT, EXTRA HEAVY WEIGHT, POSTURE MOLDED SOLID PLASTIC, ELONGATED, OPEN FRONT, LESS COVER, EXTERNAL CHECK HINGES, STAINLESS STEEL HINGE POSTS, WHITE	-	-	-	-	-	CHURCH 9500C; BEMIS, 1655C; OLSONITE, 95/SS	
WC2	WATERCLOSET, WALL MOUNT, FLUSHOMETER VALVE, TOP SPUD, ELONGATED, SIPHON ACTION JETTED BOWL, VITREOUS CHINA, WHITE, ASME A112.19.2M, 2" FULLY GLAZED TRAPWAY, 1.28 GPF.	4"	2"	-	-	-	AMERICAN STANDARD, 2257.101; KOLHER, K-4325; ZURN, Z5615-BWL; SLOAN, ST-2459.	
	FLUSHOMETER VALVE, 1.28 GPF, EXPOSED DIAPHRAGM-TYPE, CHROME PLATED, 1 1/2" TOP SPUD, SPUD COUPLING AND FLANGE, OSCILLATING NON-HOLD OPEN HANDLE, CHROME PLATED ANGLE STOP WITH STOP CAP, VACUUM BREAKER FLUSH CONNECTION, CAST WALL FLANGE WITH SET SCREW, ANSI/ASME 112.19.6	-	-	1 1/2"	-	-	SLOAN, 111-1.28; ZURN, Z6000AV-HET.	
	SEAT, EXTRA HEAVY WEIGHT, POSTURE MOLDED SOLID PLASTIC, ELONGATED, OPEN FRONT, LESS COVER, EXTERNAL CHECK HINGES, STAINLESS STEEL HINGE POSTS, WHITE	-	-	-	-	-	CHURCH 9500C; BEMIS, 1655C; OLSONITE, 95/SS	
	FIXTURE CARRIER, ADJ. HEIGHT, FOOT/ANCHOR LEG SUPPORT, HORIZONTAL/VERTICAL DISCHARGE	-	-	-	-	-	JOSAM SERIES 12000; WATTS, ISCA; OR EQUAL IN ZURN OR JR SMITH	
U1	URINAL, 0.5 GPF, WALL MOUNT, VITREOUS CHINA, 14" EXTENDED FLUSHING RIM, SIPHON JET ACTION, 3/4" INLET SPUD, INLET AND OUTLET SPUDS AND HANGERS, ASME/ANSI A112.19.2	2"	2"	-	-	-	AMERICAN STANDARD, 6550.001; KOHLER, K-5016-ET; ZURN, Z5730.	
	FLUSHOMETER VALVE, 0.5 GPF, EXPOSED DIAPHRAGM-TYPE, CHROME PLATED, 3/4" TOP SPUD, SPUD COUPLING AND FLANGE, NON-HOLD OPEN HANDLE, CHROME PLATED ANGLE STOP WITH STOP CAP, VACUUM BREAKER FLUSH CONNECTION, CAST WALL FLANGE WITH SET SCREW, ANSI/ASME 112.19.6	-	-	3/4"	-	-	SLOAN, 186-0.5; ZURN, Z6003AV-EWS.	
	FIXTURE CARRIER, HANGER AND BEARING PLATES, ADJ. SUPPORTING RODS, UPRIGHTS, WELDED FEET	-	-	-	-	-	JOSAM, SERIES 17560-UR; WATTS, CA-321; ZURN, Z1222; OR JR SMITH, 0632	
L1	LAVATORY, 21"X15" RECTANGULAR UNDER MOUNT, VITREOUS CHINA, FRONT OVERFLOW, UNGLAZED RIM, ANSI A112.19.2.	2"	1 1/2"	-	-	-	AMERICAN STANDARD, 0614.000; KOHLER, K-2339; SLOAN, SS-3021.	
	FAUCET, CONCEALED DECK MOUNT, CHROME PLATED BRASS, 5" INTEGRAL SPOUT, TWO-HANDLE, 1/4 TURN, 4" WRIST BLADE HANDLES, 8" CENTERS, NSF 61 COMPLIANT, ANSI A112.18.1M, 0.5 GPM MAX. FLOW RATE	-	-	1/2"	1/2"	-	CHICAGO FAUCETS, 404-E70-317XKABCP; T&S BRASS, B-2990-WH4-VF05; ZURN, Z831R4-XL-27M.	
	SUPPLY AND STOPS, LOOSE KEY, CHROME PLATED BRASS VALVES AND CHROME PLATED COPPER RISERS	-	-	-	-	-	MCGUIRE, H2165CCLK; T&S BRASS, B-1305; OR BRASSCRAFT, OCR1912A	
	P-TRAP, CHROME PLATED CAST BRASS BODY WITH CLEANOUT, SEAMLESS WALL BEND, 17 GA.	-	-	-	-	-	MCGUIRE, 8902; BRASSCRAFT, 507; OR EQUAL IN T&S BRASS	
	OFFSET TAILPIECE AND STRAINER, CHROME PLATED CAST BRASS	-	-	-	-	-	MCGUIRE, 155WC; OR EQUAL IN T&S BRASS; OR BRASSCRAFT	
	THERMOSTATIC MIXING VALVE, 0.25 GPM MINIMUM FLOW, INTEGRAL INLET CHECK VALVES AND STRAINER, SET TEMPERATURE TO 105°, ASSE 1070.	-	-	1/2"	1/2"	-	WATTS, LFUSG-B; LEONARD, 170-LF; OR EQUAL	
L2	LAVATORY, 20"X18" VITREOUS CHINA WALL MOUNT, 4" CENTER FAUCET HOLES, FRONT OVERFLOW, CONCEALED ARM CARRIER SYSTEM, DECK MOUNTED FAUCET, INTEGRAL 4" BACKSPLASH, ANSI A112.19.2	2"	1 1/2"	-	-	-	AMERICAN STANDARD, 0355.012; KOHLER, K-2005; ZURN, Z5364; SLOAN, SS-3003.	
	FAUCET, DECK MOUNT, CHROME PLATED BRASS, 4" INTEGRAL SPOUT, TWO-HANDLE, 1/4 TURN, 4" WRIST BLADE HANDLES, 4" CENTERS, NSF 61 COMPLIANT, ANSI A112.18.1M, 0.5 GPM MAX. FLOW RATE	-	-	1/2"	1/2"	-	CHICAGO FAUCETS, 802-V317E66XKABCP; T&S BRASS, B-0890-VF05; ZURN, Z81104-XL-27M.	
	SUPPLY AND STOPS, LOOSE KEY, CHROME PLATED BRASS VALVES AND CHROME PLATED COPPER RISERS	-	-	-	-	-	MCGUIRE, H2165CCLK; T&S BRASS, B-1305; OR BRASSCRAFT, OCR1912A	
	P-TRAP, CHROME PLATED CAST BRASS BODY WITH CLEANOUT, SEAMLESS WALL BEND, 17 GA.	-	-	-	-	-	MCGUIRE, 8902; BRASSCRAFT, 507; OR EQUAL IN T&S BRASS	
	OFFSET TAILPIECE AND STRAINER, CHROME PLATED CAST BRASS	-	-	-	-	-	MCGUIRE, 155WC; OR EQUAL IN T&S BRASS; OR BRASSCRAFT	
	FIXTURE CARRIER, CONCEALED ARMS, LEVELING AND SECURING SCREWS, UPRIGHTS, WELDED FEET	-	-	-	-	-	JOSAM, SERIES 17100; WATTS, CA-411; ZURN, Z1231; OR JR SMITH, 0700	
	THERMOSTATIC MIXING VALVE, 0.25 GPM MINIMUM FLOW, INTEGRAL INLET CHECK VALVES AND STRAINER, SET TEMPERATURE TO 105°, ASSE 1070.	-	-	1/2"	1/2"	-	WATTS, LFUSG-B; LEONARD, 170-LF; OR EQUAL	
SHR1	SHOWER WITH INSTITUTIONAL HEAD, PRESSURE BALANCING, LEVER HANDLE, INTEGRAL SERVICE STOPS	-	-	1/2"	1/2"		SYMMONS 96-1-295-XL; LEONARD VALVE 4500-H06-ADJ	
	SHOWER STALL STRAINER, HEAVY CAST BRASS BODY, STAINLESS STEEL GRID	2"	1 1/2"	-	-	-	JOSAM SERIES 30000-A-50;, OR EQUAL IN ZURN, WADE OR JR SMITH	
SHR2	SHOWER W/ HANDSPRAY, PRESSURE BALANCING, LEVER HANDLE, INTEGRAL SERVICE STOPS	-	-	1/2"	1/2"	-	SYMMONS 96-500-B30LVX295; LEONARD VALVE 4500-H06-ADJ-501P-D2L	
	SHOWER STALL STRAINER, HEAVY CAST BRASS BODY, STAINLESS STEEL GRID	2"	1 1/2"	-	-	-	JOSAM SERIES 30000-A-50;, OR EQUAL IN ZURN, WADE OR JR SMITH	
MSB1	MOP SINK BASIN, ONE PIECE-PRECAST TERRAZZO 24"x24"x12" (1 1/4" WALL THICKNESS WITH MINIMUM 9.75" INSIDE DEPTH) 6" DROP FRONT, STAINLESS STEEL EDGE CAPS ON ALL SIDES, STAINLESS STEEL WALL GUARDS, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER	3"	2"	-	-	-	FIAT MODEL TSB-3000; STERN WILLIAMS HL-1810; FLORESTONE MODEL 92	
	FAUCET, EXPOSED YOKE, WALL MOUNTED UTILITY FAUCET, VACUUM BREAKER, 6"THREADED SPOUT	-	-	3/4"	3/4"	-	MOEN, 8124;CHICAGO,540-LD897SWXFCP;DELTA, 28T2383;T&S BRASS, B-0665	
	24"x3" STAINLESS STEEL MOP BRACKET WITH THREE RUBBER TOOL GRIPS	-	-	-	-	-	FIAT MODEL 889-CC; OR EQUAL	
	30" RUBBER HOSE (5/8"), CHROME COUPLING 1 END, 5"x3" STAINLESS STEEL BRACKET W/ RUBBER GRIP	-	-	-	-	-	FIAT MODEL 832-AA; OR EQUAL	
	ALUMINUM BUMPER GUARD ON LEADING EDGE OF MOP SINK BASIN	-	-	-	-	-	FIAT MODEL 1239-BB; OR EQUAL	

MARK	DESCRIPTION	ROUGH IN (MINIMUM) W	V	CW	HW	E	MANUFACTURER AND MODEL NUMBER	ADA /TAS
S1	SINK, SINGLE COMPARTMENT, 30"x18"x6", UNDERMOUNT, #18 GAUGE TYPE 304 STAINLESS STEEL, FULLY UNDERCOATED, ANSI A112.19.3M. DRAIN CENTERED IN REAR OF BASIN.	2"	1 1/2"	-	-	-	JUST, USN-ADA-1830-A-GR; OR APPROVED EQUAL	
	FAUCET, DECK MOUNT, CHROME PLATED BRASS, RIGID SWING GOOSENECK SPOUT, TWO-HANDLE, 1/4 TURN 4" WRIST BLADE HANDLES, 4" CENTERS, NSF 61 COMPLIANT, ANSI A112.18.1M, 2.2 GPM MAX. FLOW RATE	-	-	1/2"	1/2"	-	CHICAGO, 895-317; MOEN COMMERCIAL, 8278; DELTA 2171WBHHDF; T&S BRASS, B-0892	
	SUPPLY AND STOP, LOOSE KEY, CHROME PLATED BRASS VALVES AND CHROME PLATED COPPER RISERS	-	-	1/2"	1/2	-	MCGUIRE, H2167CCLK; OR EQUAL IN T&S BRASS OR BRASSCRAFT	
	P-TRAP, CHROME PLATED CAST BRASS BODY WITH CLEANOUT, SEAMLESS WALL BEND, 17 GA.	-	-	-	-	-	MCGUIRE, 8912; OR EQUAL IN T&S BRASS OR BRASSCRAFT	
	TAILPIECE AND FORGED STAINLESS STEEL BASKET STRAINER	-	-	-	-	-	JUST J-ADA-35; OR EQUAL IN MCGUIRE, T&S BRASS OR BRASSCRAFT	
S2	SINK, DOUBLE COMPARTMENT, 32"x18"X8", UNDERMOUNT, #18 GAUGE TYPE 304 STAINLESS STEEL, FULLY UNDERCOATED, ANSI A112.19.3M	2"	1 1/2"	-	-	-	JUST, UDF-1832-A, OR APPROVED EQUAL	
	FAUCET, DECK MOUNT, 10" SWING SPOUT, CHROME PLATED BRASS, 8" CENTERS, W/HAND SPRAY, CHROME PLATED BRASS, TWO-1/4 TURN 4" WRIST BLADE HANDLES, NSF 61 COMPLIANT, ANSI A112.18.1M, 2.2 GPM	-	-	1/2"	1/2"	-	CHICAGO, 2300-8CP; MOEN, 8720; DELTA, 400-WFELHHDF; T&S BRASS, B-2721	
	SUPPLY AND STOP, LOOSE KEY, CHROME PLATED BRASS VALVES AND CHROME PLATED COPPER RISERS	-	-	-	-	-	MCGUIRE, H2167CCLK; OR EQUAL IN T&S BRASS OR BRASSCRAFT	
	P-TRAP, CHROME PLATED CAST BRASS BODY WITH CLEANOUT, 17 GA., END-OUTLET CONTINUOUS WASTE	-	-	-	-	-	MCGUIRE, 8912/111C16G20; OR EQUAL IN T&S BRASS OR BRASSCRAFT	
	TAILPIECE AND FORGED STAINLESS STEEL BASKET STRAINER	-	-	-	-	-	JUST J-ADA-35; OR EQUAL IN MCGUIRE, T&S BRASS OR BRASSCRAFT	
	GARBAGE DISPOSER, CONTINUOUS FEED, 1/2 HP, GALV. STEEL GRINDING ELEMENTS, S.S. 360° SWIVEL LUGS	-	-	-	-	-	IN-SINK-ERATOR, BADGER 5; GE GFC520; WHIRLPOOL GC2000PE	
EWC1	TWO STATION WATER COOLER, INDOOR BI-LEVEL WALL MOUNTED, SELF CONTAINED ELECTRIC REFRIGERATION, STAINLESS STEEL BASIN AND CABINET WITH ANTI-SPLASH RIDGE, INTEGRAL DRAIN STRAINER, NON-SQUIRT BUBBLER, PUSH BUTTON ACTIVATION ON FRONT OF WATER COOLER. PROVIDE WITH BOTTLE FILLER. REFRIGERATION SYSTEM SERVING BOTH BI-LEVELS TO INCLUDE HIGH EFFICIENCY COMPRESSOR, R-134A, FULLY INSULATED STAINLESS STEEL TANK, 8 GPH WITH 50°F SUPPLY TEMPERATURE AND 80°F AMBIENT, 115VOLT. ANSI 117.1, NFS/ANSI 61,	2"	1 1/2"	-	-	115V	ELKAY LVRCGRNTL8WSK ADA HALSEY TAYLOR HTHB-HVRGRN8BL-WF ADA OR APPROVED EQUAL	
	HANDICAPPED COMPLIANT APRON, MOLDED STAINLESS STEEL SKIRT KIT FOR INSTALLATION ON THE HIGH UNIT	-	-	-	-	-	ELKAY MODEL LKAPREZL; HAWS SK9SS	
	SERVICE STOP WITH DIELECTRIC COUPLING	-	-	1/2"	-	-	REFER TO MANUFACTURER FOR REQUIREMENTS	
	P-TRAP, PVC, WHITE	-	-	-	-	-	DEARBORN BRASS, A9701BG; KEYSAN MOEM9100; OR EQUAL	
	FIXTURE CARRIER, STEEL TOP AND BOTTOM PLATES W/ ADJ. HOLES, CHROME PLATED CAP NUTS/WASHERS	-	-	-	-	-	JOSAM SERIES 17905; WATTS, CA-431-1; OR EQUAL IN ZURN OR JR SMITH	
WMB1	WASHING MACHINE CONNECTION BOX, STAINLESS STEEL WITH CENTER DRAIN, 1/2" HALF TURN VALVES	2"	1 1/2"	1/2"	1/2"	-	GUY GRAY, SSWB OR EQUAL	
FD1	FLOOR DRAIN, CAST IRON BODY, ANCHOR FLANGE, WEEPHOLES FOR DOUBLE DRAINAGE, 6" SQUARE STAINLESS STEEL FLAT STRAINER. ADJUSTABLE DRAIN HEAD W/ MACHINED INTEGRAL BODY THREADS, ASME A112.21.1	-	-	-	-	-	JOSAM SERIES 30000-S-SS; MIFAB F1000-C-S6-3; ZURN Z-415-S6	
	PROVIDE TRAP SEAL SYSTEM COMPRISED OF AN DRAIN INSERT CONSTRUCTED OF SMOOTH, SOFT, FLEXIBLE, ELASTOMERIC PVC MATERIAL MOLDED INTO SHAPE OF DUCK'S BILL, OPEN ON TOP WITH CURL CLOSURE AT BOTTOM.	-	-	-	-	-	PROSET SYSTEMS, INC., TRAP GUARD	
FS1	FLOOR SINK, 8"x8"x6", CI BODY, DBL DRAINAGE FLANGE, STAINLESS STEEL DOME STRAINER, 3/4 GRATE, NON-PUNCTURING FLASHING COLLAR, PORCELAIN ENAMEL OR EPOXY COATED INTERIOR	-	-	-	-	-	JOSAM SERIES 49000-4; MIFAB FS1520-175; ZURN Z-1910	
TD1	TRENCH DRAIN, 12" WIDE WITH 4 1/2" THROAT, POLYPOPYLENE MODULAR CHANNEL SECTIONS, INTERLOCKING ENDS, RADIUS BOTTOM, 0.75% BUILT-IN SLOPE, CENTER BOTTOM OUTLET, ACID RESISTANT COATED FRAME, HEAL PROOF DUCTILE IRON GRATE, VANDAL PROOF SECURED GRATE.	-	-	-	-	-	WATTS, DEAD LEVEL; OR EQUAL.	
WCO	WALL CLEANOUT, CI BODY, RECESSED, THREADED BRASS PLUG, STAINLESS STEEL ACCESS COVER	-	-	-	-	-	JOSAM SERIES 58890; MIFAB C1460; ZURN Z-1441	
FCO	FLOOR CLEANOUT, COATED CAST IRON BODY, COMBINATION ADJUSTABLE ROUND STAINLESS STEEL COVER AND PLUG TOP ASSEMBLY, GASKET SEAL, ASME 112.36.2	-	-	-	-	-	JOSAM SERIES 58360; MIFAB C1000-R/S; ZURN Z-1400	
GCO	GRADE CLEANOUT, HEAVY DUTY COATED CAST IRON ACCESS BODY WITH ANCHOR FLANGES, HEAVY DUTY DUCTILE IRON ACCESS COVER WITH VANDAL RESISTANT STAINLESS STEEL SCREWS	-	-	-	-	-	JOSAM SERIES 56680-5-26-VP; MIFAB C1300-MF-6; ZURN Z-1474-SG-VP	
DCO	2-WAY GRADE CLEANOUT, TWO-RISER CLEANOUT BODY WITH HEAVY DUTY COATED CAST IRON ACCESS BODY WITH ANCHOR FLANGES, HEAVY DUTY DUCTILE IRON ACCESS COVER WITH VANDAL RESISTANT STAINLESS STEEL SCREWS	-	-	-	-	-	JOSAM SERIES 56680-5-26-VP; MIFAB C1300-MF-6; ZURN Z-1474-SG-VP	
PCO	SPIGOT CONNECTION, RAISED HEAD THREADED BRASS PLUG	-	-	-	-	-	JOSAM; MIFAB; ZURN	
HB1	HOSE BIBB, BRASS WITH CHROME FINISH, VACUUM BREAKER, 3/4" MALE N.H.T OUTLET, WALL FLANGE	-	-	3/4"	-	-	MIFAB MHY-90; ZURN Z1341; WOODFORD #24	
NFWH1	NON-FREEZE WALL HYDRANT, CONCEALED WALL TYPE, CHROME FINISH ON BRASS CASTINGS, VACUUM BREAKER, LOOSE KEY HANDLE, 3/4" MALE HOSE THREAD NOZZLE. PROVIDE SAMPLES OF MATERIAL AND FINISHES FOR THE EXTERIOR HOSE CONNECTION FOR ARCHITECTURAL SELECTION OF FINISH.	-	-	3/4"	-	-	WOODFORD, #B67; MIFAB MHY-35; JOSAM SERIES 71020; ZURN Z-1300	
IMB1	REFRIGERATOR ICE MAKER CONNECTION BOX, 8"X8" RECESSED STAINLESS STEEL ENCLOSURE			3/4"			GUY GREY MODEL SSIB1; OR EQUAL	

NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL SUPPLIES, STOPS, TRAPS, TAILPIECES AND ALL APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION OF ALL FIXTURES.
2. ALL ADA ACCESSIBLE SINKS AND LAVATORIES SHALL BE EQUIPPED WITH TRUEBRO #103 UNDER SINK PROTECTIVE PIPE COVERS WHERE NOT CONCEALED BY MILLWORK.
3. COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE TEXAS ACCESSIBILITY'S STANDARD (TAS). PLUMBING CONTRACTOR SHALL PROVIDE PLUMBING FIXTURES WITH FLUSH VALVE HANDLES LOCATED ON THE WIDE SIDE OF EACH STALL OR ROOM.
4. FLOOR CLEANOUT ACCESS COVERS IN ALL FINISHED AREAS SHALL BE OF THE RECESSED TYPE TO ALLOW FOR INSERTION OF FINISHED FLOOR TREATMENT. TILE OR CARPET MARKER AS NECESSARY.
5. ABOVE THE FLOOR P-TRAPS ON LAVATORIES AND SINKS SHALL BE 17 GAUGE, CHROME PLATED BRASS. ACCEPTABLE MANUFACTURERS: MCGUIRE, T&S BRASS, OR BRASSCRAFT.
6. CONTRACTOR SHALL VERIFY FIXTURE SUPPLIES AND APPURTENANCES FOR EACH FIXTURE PRIOR TO BIDDING AND PURCHASING.
7. ALL FLOOR MOUNTED WATER CLOSETS SHALL HAVE 10" ROUGH-IN UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL VERIFY PLUMBING FIXTURES PROVIDED COMPLY WITH HANDICAPPED ACCESSIBILITY STANDARDS INCLUDING HEIGHT AND CLEARANCE REQUIREMENTS.
9. ALL WATER CLOSET AND URINAL FLUSH VALVES SHALL INCLUDE CHROME PLATED CAST WALL FLANGE WITH SETSCREW AND COVER TUBE.
10. WATER CLOSETS AND URINALS INDICATED WITH SENSOR OPERATED FLUSH VALVES SHALL INCLUDE METAL COVER AND MANUAL OVERRIDE BUTTON.
11. LAVATORIES INDICATED WITH SENSOR OPERATED FAUCETS SHALL BE BATTERY OPERATED AND PROVIDED WITH A OF TEMPERING VALVE SET FOR 85°F.
12. PROVIDE NON-SHRINK GROUT BELOW ALL SHOWER ENCLOSURES AND SHOWER RECEPTORS AS RECOMMENDED BY THE MANUFACTURER.

GREASE INTERCEPTOR SCHEDULE

GT-1, GREASE INTERCEPTOR, PARK GT-500 OR APPROVED EQUAL

GREASE INTERCEPTOR WITH 500 GALLON LIQUID HOLDING CAPACITY, 1,200 LBS. GREASY SLUDGE CAPACITY. INTERCEPTOR SHALL BE CONSTRUCTED OF CLASS II CONCRETE WITH A MINIMUM DESIGN STRENGTH OF 4,500 PSI AT 28 DAYS. UNIT SHALL BE OF MONOLITHIC CONSTRUCTION INCLUDING BAFFLE. INTERCEPTOR SHALL BE CLASSIFIED WITH GRADE 60 REINFORCEMENT WITH STEEL REBAR CONFORMING TO ASTM A615. MANHOLE FRAMES AND COVERS SHALL BE GRAY CAST IRON CONFORMING TO ASTM A48-76, CLASS 30. MANHOLE COVERS SHALL BE NOMINAL 24 INCH DIAMETER AND BE HEAVY TRAFFIC DUTY (H-20 LOADING). PROVIDE CONCRETE EXTENSIONS AS REQUIRED TO EXTEND MANHOLE COVERS TO FINISHED GRADE. GREASE INTERCEPTOR SHALL BE PARKS EQUIPMENT, GT-1500 OR EQUAL. REFER TO P-601.

SW-1, SAMPLE WELL

PROVIDE SAMPLE WELL BASIN (TEST WELL) DOWNSTREAM OF GREASE INTERCEPTOR. SAMPLE WELL SHALL BE CONSTRUCTED SAME AS GREASE INTERCEPTOR WITH MANHOLE COVER LABELED "SAMPLE WELL". SAMPLE WELL BASIN SHALL BE PARKS EQUIPMENT, SWB-154 OR EQUAL. RE: P-601

OILY WASTE INTERCEPTOR SCHEDULE

SI-1, SOLIDS SEPARATOR, PARK SOLIDS TROOPER SYSTEM STSC-200 OR APPROVED EQUAL

SOLIDS INTERCEPTOR AND ALARM SYSTEM WITH 20 GPM FLOW CAPACITY, 480 SOLIDS CAPACITY; 120 V, 5 AMP AUDIBLE & VISUAL ALARM. GASTITE REMOVABLE STEEL ACCESS COVER WITH NEOPRENE GASKET, SECURED WITH STAINLESS STEEL BOLTS, EXTRA HEAVY LEAK PROOF GASKET, OIL RESISTANT INNER COATING AND BITUMINOUS OUTSIDE COATING. THE SEPARATOR SHALL HAVE A REMOVABLE STAINLESS STEEL FILTER SCREEN WITH MAINTENANCE PROBE. A SERVICE ALERT PANEL NOTIFIES OF CLOGGED FILTER WITH AUDIBLE & VISUAL ALARM. RE" P-601.

LINT INTERCEPTOR SCHEDULE

TAG	CAPACITY (GAL)	WASTE	VENT	MANUFACTURER	MODEL
LT-1	50	1.5	1.5	PARK USA	LTSSB-50

AIR COMPRESSOR SYSTEM SCHEDULE

RAC1, RECIPROCATING AIR COMPRESSOR

TWO-STAGE, RECIPROCATING AIR COMPRESSOR WITH 80 GALLON VERTICAL RECEIVER CAPABLE OF PROVIDING A MINIMUM OF 24 CFM (FREE AIR DISCHARGE) AT 175 PSIG, 7.5 HP, 208 VOLT 3Ø, 60 HZ. INGERSOL-RAND, TYPE T-30, MODEL 2475N7.5-V. PROVIDE PACKAGED WITH MINIMUM OF AUTOMATIC START AND STOP CONTROL, LOW OIL SWITCH, ELECTRIC DRAIN VALVE, AIR COOLED AFTERCOOLER, NEMA 1 MOTOR AND MAGNETIC MOTOR STARTER.

COMPRESSED AIR FILTER

PROVIDE GENERAL PURPOSE INLINE COALESCING FILTER TO PROVIDE PARTICLE REMOVAL DOWN TO 0.01 MICRON INCLUDING COALESCED LIQUID WATER AND OIL. INGERSOL RAND MODEL IRGP64 OR EQIVALENT. PROVIDE WITH DIFFERENTIAL PRESSURE INDICATOR.

STATE OF TEXAS
11/11/2019
JOHN S. OKELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

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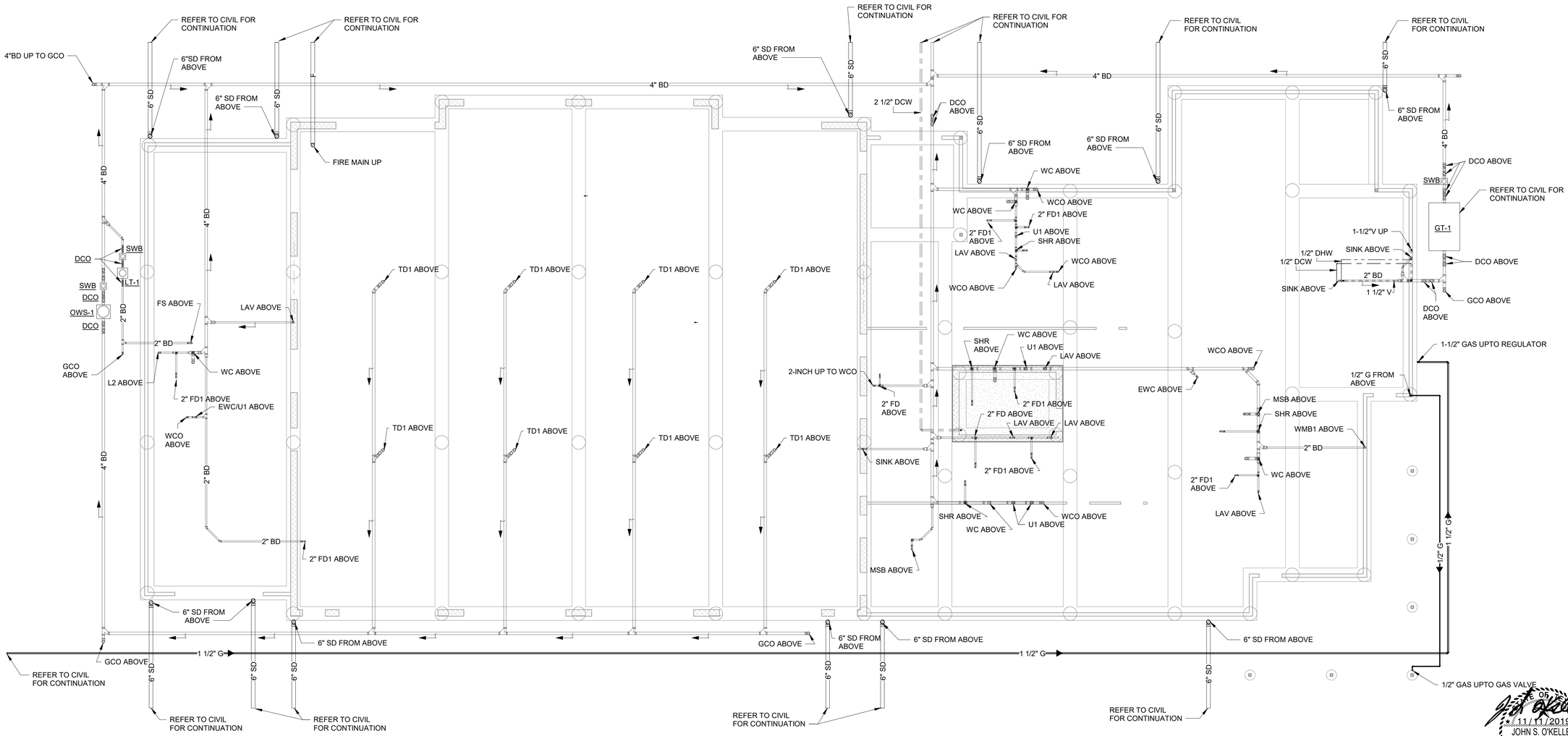
MANSFIELD FIRE STATION NO. 5

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PLUMBING SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	P0.02

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1 P2.00 UNDERFLOOR PLAN - PLUMBING

1/8" = 1'-0"

8' 0' 8' 16'

1/8" = 1'-0"

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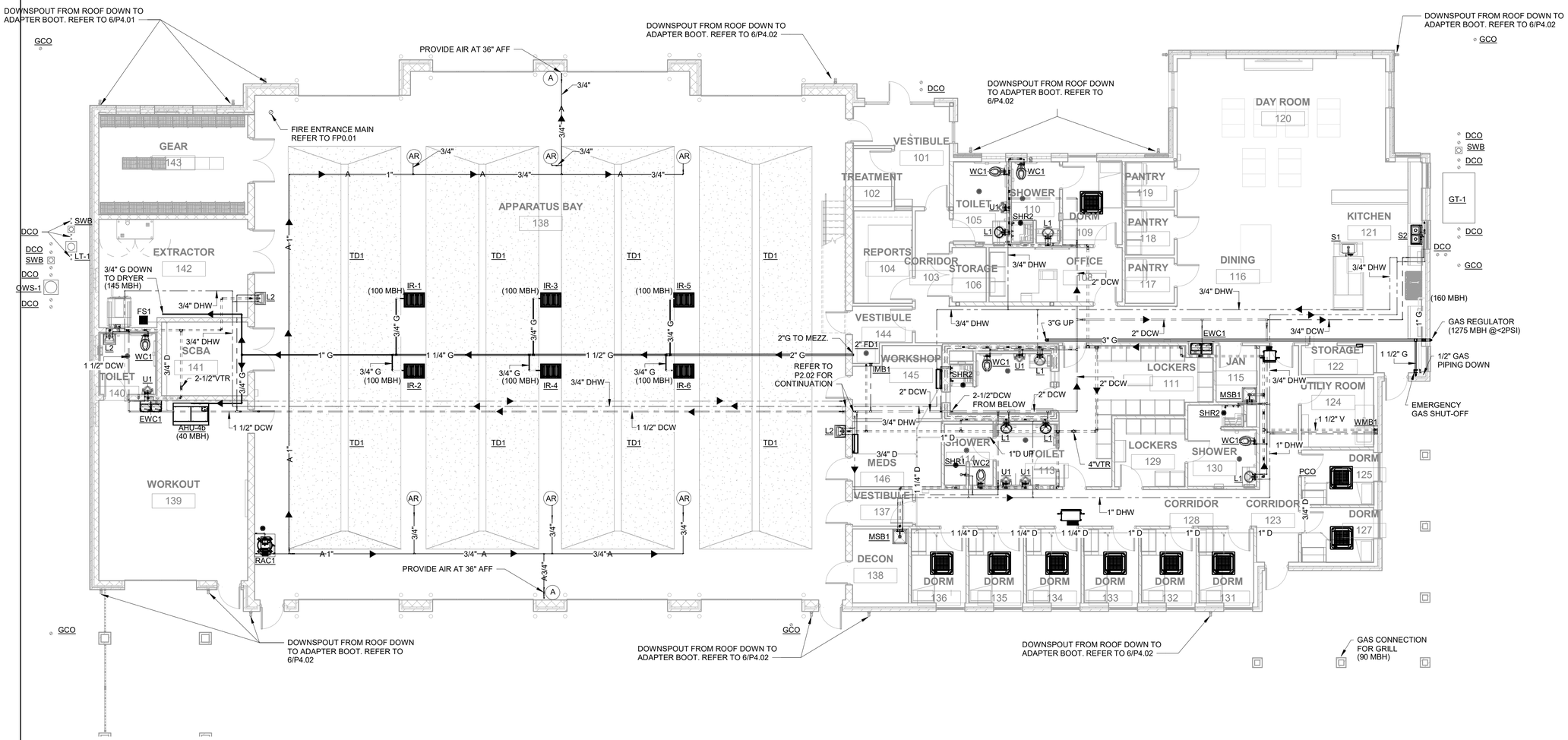
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UNDER-GRADE PLAN - PLUMBING

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JOB NO:	2016.166
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SHEET:	P2.00

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1 / P2.01 FLOOR PLAN - PLUMBING

1/8" = 1'-0"

8' 0' 8' 16'

1/8" = 1'-0"

No.	Description	Date
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FLOOR PLAN - PLUMBING

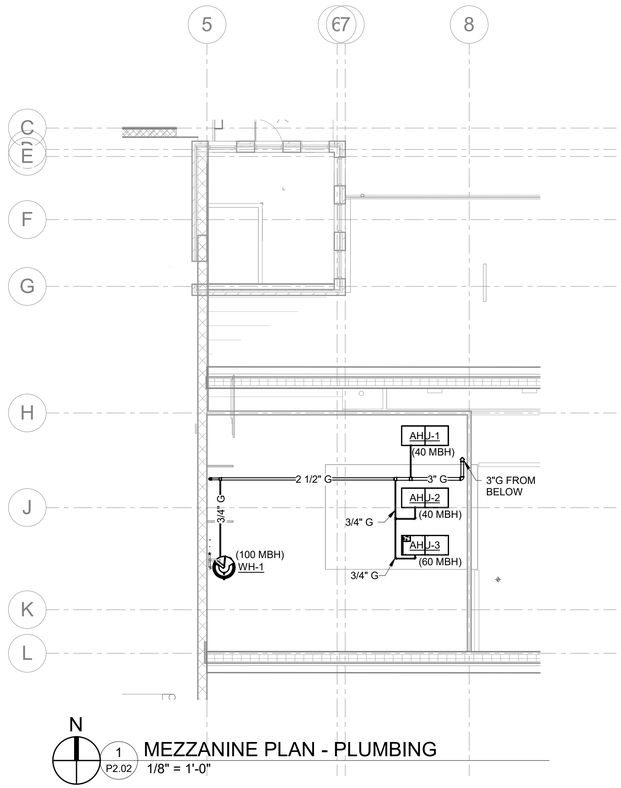
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1 P2.02 MEZZANINE PLAN - PLUMBING

1/8" = 1'-0"

8' 0' 8' 16'

1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

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MEZANINE PLAN - PLUMBING

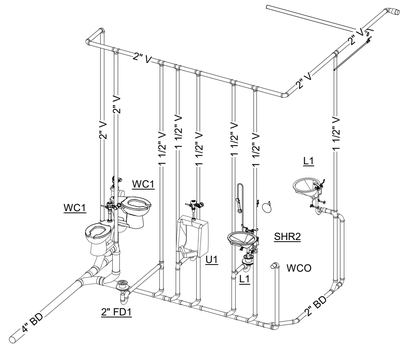
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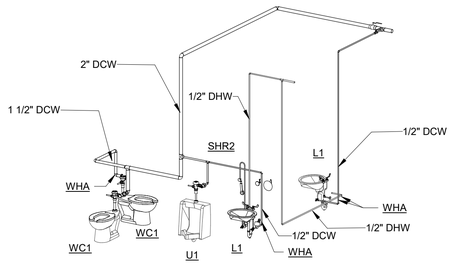
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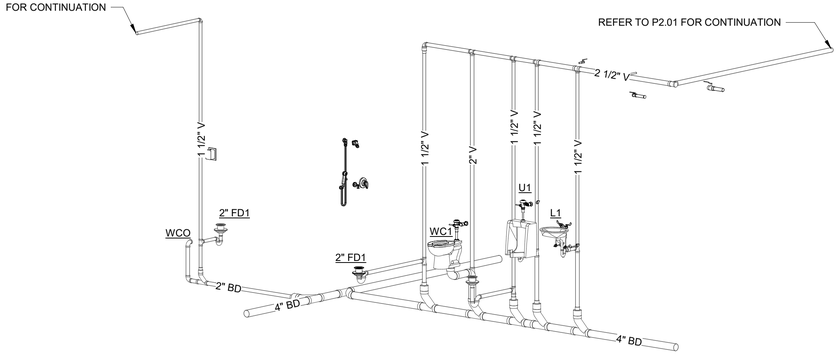
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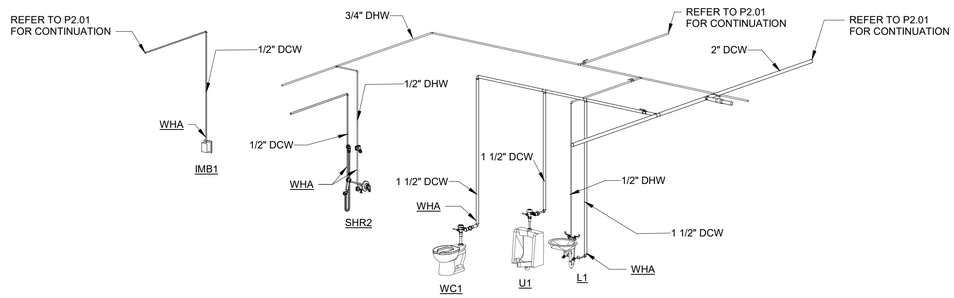
1 P3.01 ROOM 105, 110 BUILDING DRAIN



2 P3.01 ROOM 105, 110 DOMESTIC WATER



3 P3.01 ROOM 112, 144 BUILDING DRAIN



4 P3.01 ROOM 112, 144 DOMESTIC WATER

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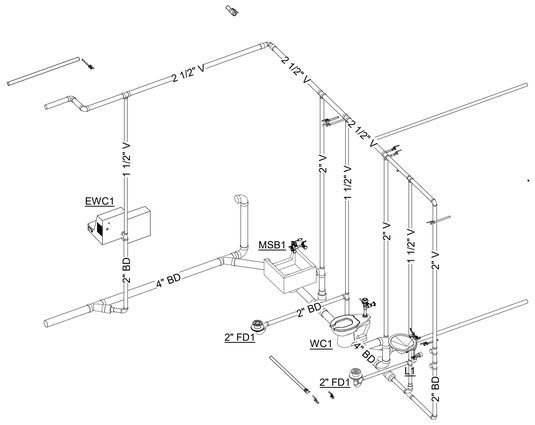
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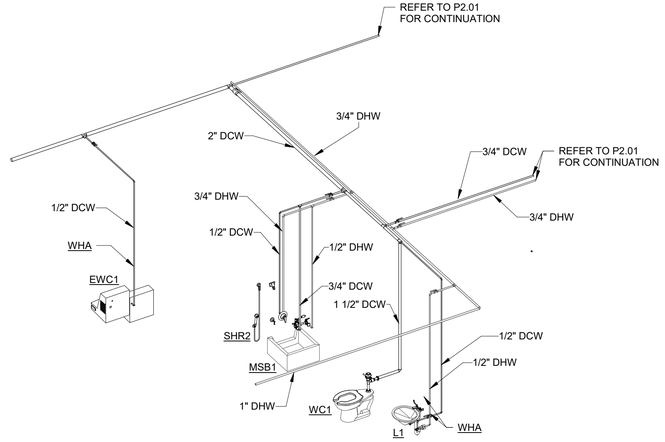
PLUMBING RISER DIAGRAM

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DATE:	11/11/2019
SHEET:	P3.01

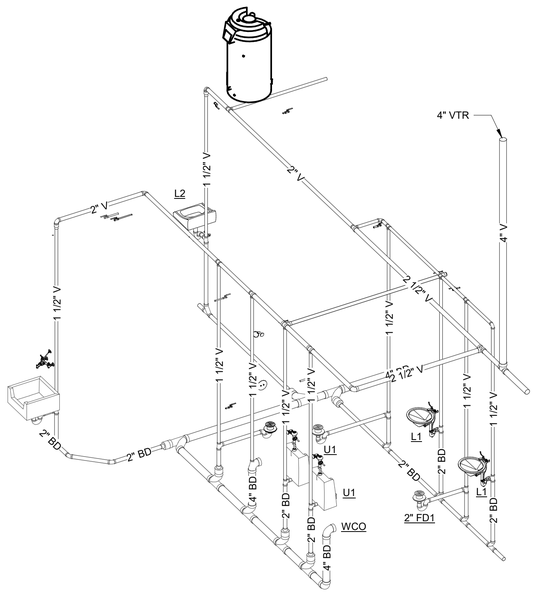
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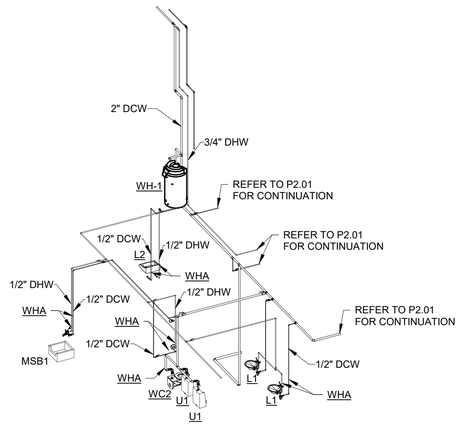
1 P3.02 ROOM 115, 130 BUILDING DRAIN



2 P3.02 ROOM 115, 130 DOMESTIC WATER



3 P3.02 ROOM 113, 114, 138, 146 BUILDING DRAIN



4 P3.02 ROOM 113, 114, 138, 146 DOMESTIC WATER

No.	Description	Date
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PLUMBING RISER DIAGRAMS

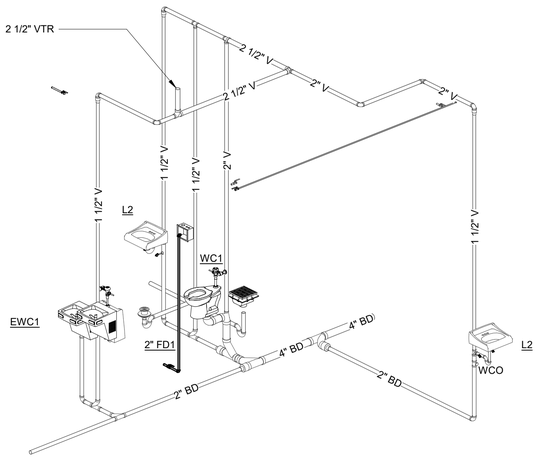
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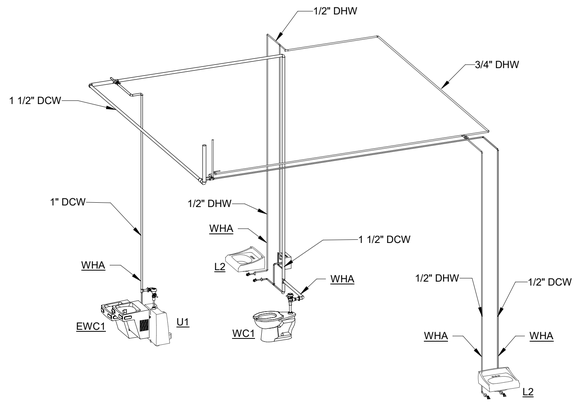
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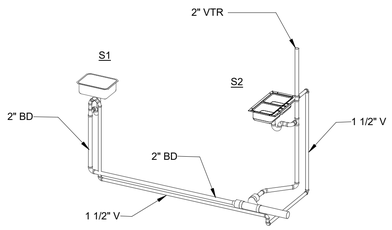
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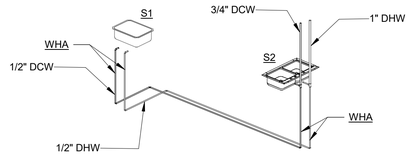
1 P3.03 ROOM 139, 140, 141 BUILDING DRAIN



2 P3.03 ROOM 139, 140, 141 DOMESTIC WATER



3 P3.03 ROOM 121 BUILDING DRAIN



4 P3.03 ROOM 121 DOMESTIC WATER

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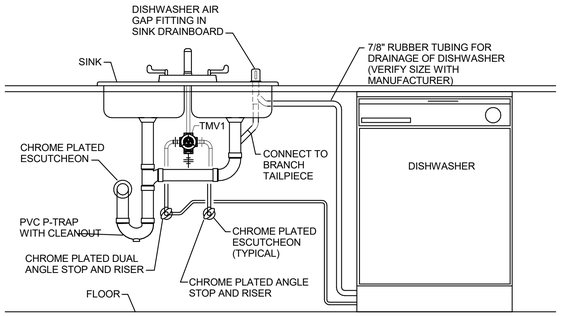
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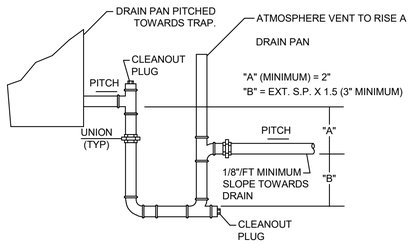
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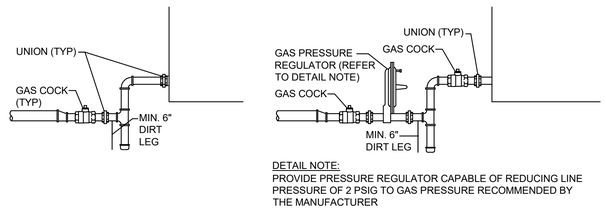
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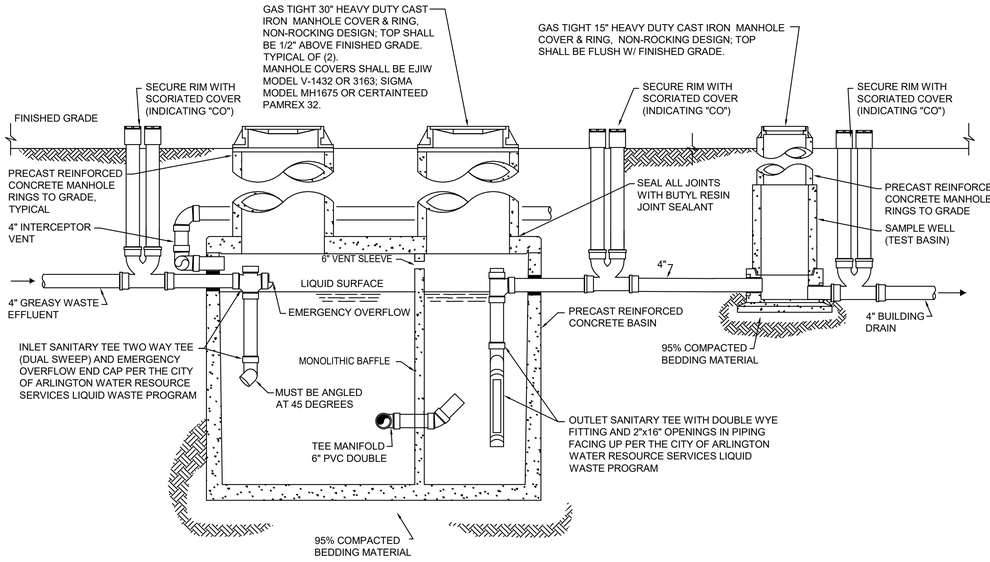
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2 CONDENSATE DRAINAGE DETAIL
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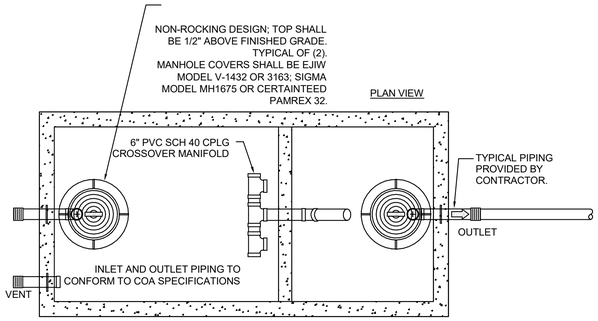
3 NATURAL GAS CONNECTION DETAIL
NO SCALE



4 GREASE INTERCEPTOR WITH SAMPLE WELL
NO SCALE

INTERCEPTOR NOTES

1. SEAL ALL PIPE PENETRATIONS WATERTIGHT
2. COAT INTERIOR OF BASIN WITH (2) COATS OF POLYURETHANE
3. REFER TO PLANS FOR PIPE SIZES, INVERT ELEVATIONS AND ROUTING
4. SECONDARY COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY
5. ALL PIPE AND FITTINGS SHALL BE CAST IRON
6. WALLS AND BOTTOM SHALL BE REINFORCED THROUGHOUT WITH 2x6, 6/10 MESH
7. COVER SHALL BE REINFORCED LONGITUDINALLY WITH NO.6 REBAR ON 6" CENTERS, N0.4 REBAR ON 6" CENTERS WIDTH WAYS, AND NO.8 REBAR DIAGONALLY AROUND ACCESS HOLES
8. GREASE INTERCEPTOR SHALL MEET THE APPROVAL OF LOCAL AUTHORITY.
9. MAX. 10'-0" BETWEEN MANHOLES.
10. ALL CONSTRUCTION SHALL CONFORM TO H-20 LIVE LOAD LOADING.
11. INTERCEPTOR WALLS AND BOTTOM SLAB SHALL BE DESIGNED FOR AN EQUIVALENT FLUID SOIL PRESSURE OF 40 Pcf/ft. INCLUDING TRUCK LOADING SURCHARGE NOTED IN NOTE 10 ABOVE.
12. PROVIDE SECURING DEVICE AS REQUIRED BY THE CITY OF ARLINGTON (VALVE BOX TOP SECTION WITH EYE-BOLT MOUNTED IN CONCRETE, BASS & HAYS 340-1 OR EQUAL)



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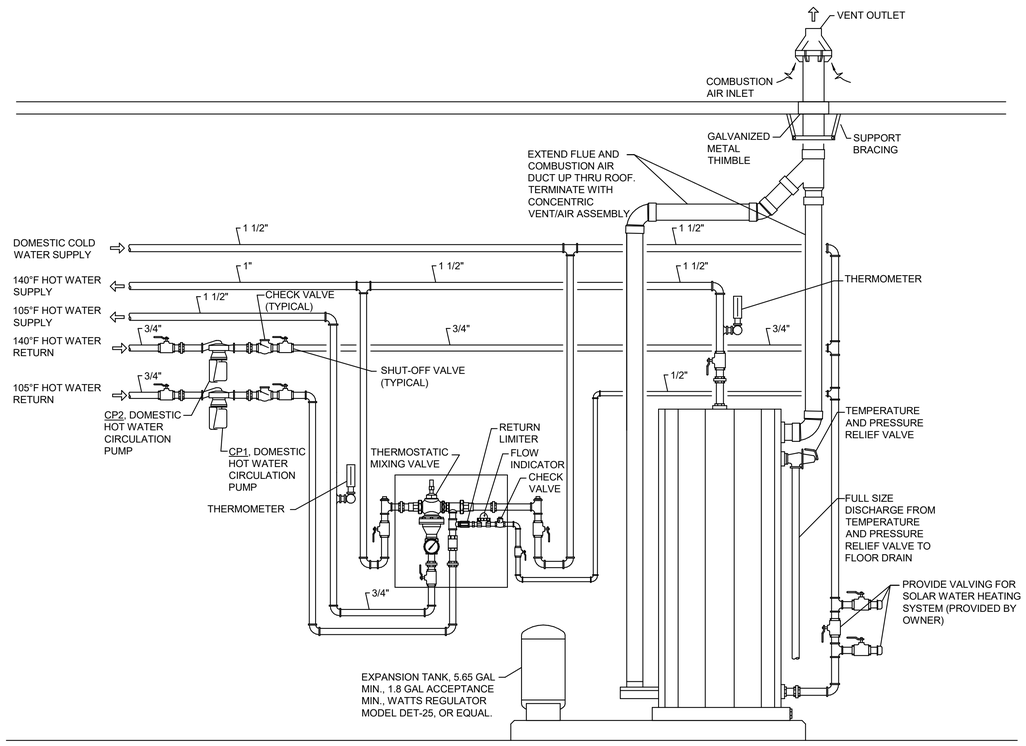
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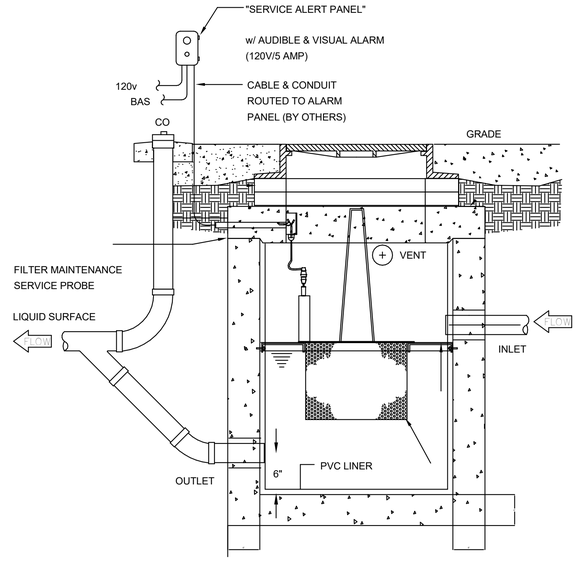
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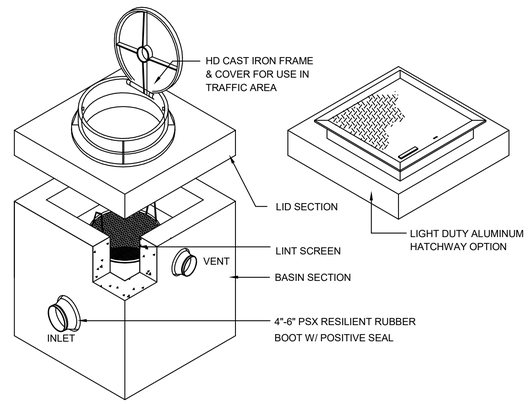
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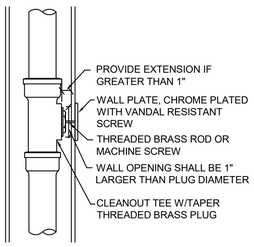


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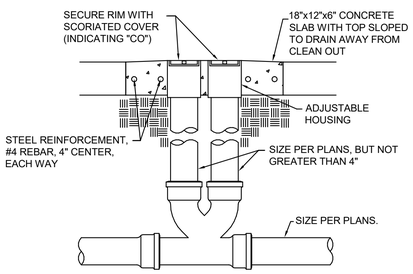


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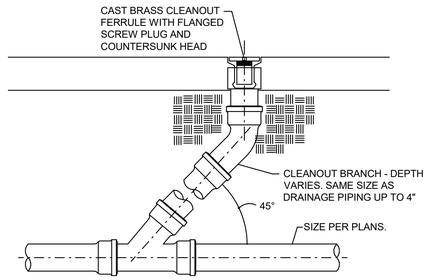




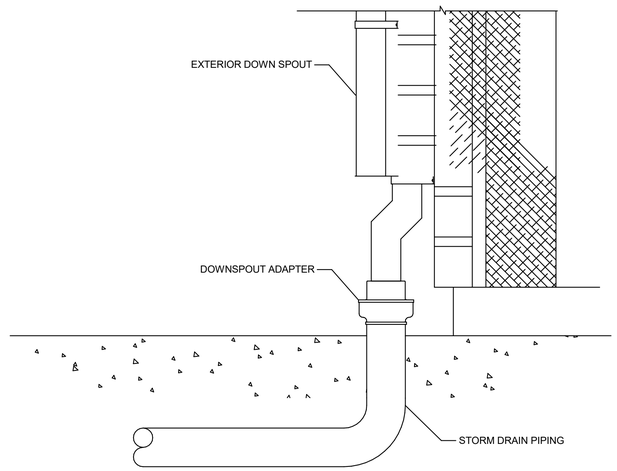
3 WALL CLEANOUT DETAIL
NO SCALE



4 TWO-WAY GRADE CLEANOUT DETAIL
NO SCALE



5 GRADE CLEANOUT DETAIL
NO SCALE



6 DOWNSPOUT ADAPTER DETAIL
NO SCALE

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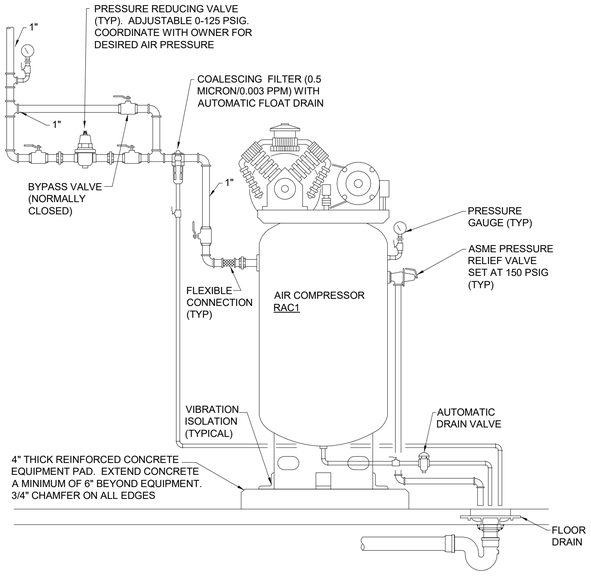
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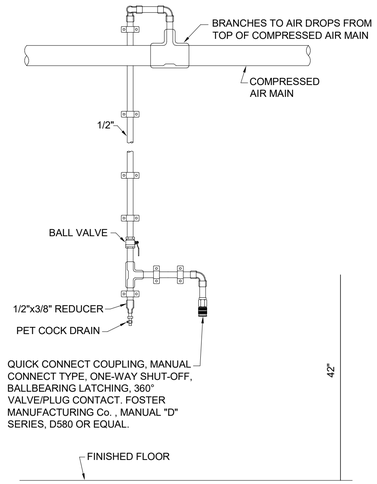
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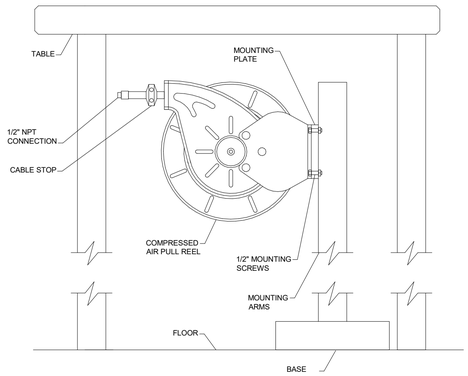
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1 AIR COMPRESSOR DETAIL
NO SCALE



2 COMPRESSED AIR DROP DETAIL
NO SCALE



3 COMPRESSED AIR PULL REEL
NO SCALE

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PLUMBING DETAILS CONTINUED

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ELECTRICAL SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

GENERAL NOTES

1. ALL DEVICE PLATES SHALL BE NYLON COVERS.
2. REFER TO ARCHITECTURAL INTERIOR ELEVATION DRAWINGS, WHERE THE ARCHITECT HAS DRAWN SUCH ELEVATIONS, FOR THE LOCATIONS OF ALL WALL MOUNTED DEVICES.
3. COORDINATE EXACT LOCATION OF ALL LIGHTING FIXTURES IN ELECTRICAL/MECHANICAL SPACES WITH EQUIPMENT, DUCTWORK AND PIPING.
4. ALL RECEPTACLE OUTLETS LOCATED WITHIN 6'-0" OF A WET BAR OR SINK SHALL BE GFI TYPE. ALL RECEPTACLE OUTLETS LOCATED OUTDOORS SHALL BE WP/GFI. ALL RECEPTACLES SERVING VENDING MACHINES SHALL BE GFI TYPE. ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS SHALL BE GFI TYPE. ALL RECEPTACLES IN KITCHEN AREAS SHALL BE GFI TYPE.
5. ALL CONDUIT PENETRATIONS THROUGH THE ROOF TO SERVE MECHANICAL EQUIPMENT SHALL BE WITHIN THE ASSOCIATED EQUIPMENT ROOF CURB. COORDINATE LOCATIONS OF PENETRATIONS WITH THE MECHANICAL CONTRACTOR.
6. PROVIDE THE TYPE OF MOUNTING HARDWARE AND TRIM NECESSARY FOR THE PROPER INSTALLATION OF SPECIFIED LIGHTING FIXTURES IN THE TYPE OF CEILING WHERE INSTALLED.
7. PROVIDE ACCESS DOORS IN WALLS AND CEILINGS WHERE ACCESS TO CONCEALED ELECTRICAL BOXES AND DEVICES IS REQUIRED.
8. EACH BRANCH AND FEEDER CIRCUIT SHALL BE PROVIDED WITH A GROUND CONDUCTOR SIZED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NFPA 70). WHERE A CONDUIT CONTAINS MULTIPLE BRANCH CIRCUITS, PROVIDE A SINGLE GROUND CONDUCTOR UNLESS OTHERWISE NOTED.
9. CONDUIT, LIGHT FIXTURES, AND OTHER COMPONENTS MAY BE SHOWN LARGER THAN ACTUAL SIZE. CONDUIT ROUTING IS SHOWN WITH AN EXAGGERATED SPACING FOR CLARITY. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL CONTRACTORS TO ENSURE CONDUIT PLACEMENT DOES NOT CONFLICT WITH LOCATION SENSITIVE COMPONENTS SUCH AS LIGHT FIXTURES.
10. INTEGRATED EQUIPMENT RATINGS SHOWN ARE MINIMUMS. CONTRACTOR SHALL PROVIDE MANUFACTURER'S EQUAL OR NEXT HIGHER STANDARD RATINGS.
11. ALL PULL CORD/WIRE PROVIDED FOR EMPTY RACEWAY/CONDUIT SYSTEMS SHALL HAVE A MINIMUM STRENGTH OF 200 LBS TENSILE STRENGTH. ALL EMPTY CONDUITS SHALL HAVE A PULL CORD.
12. PROVIDE LUGS AS REQUIRED FOR ALL ELECTRICAL EQUIPMENT TO ACCEPT THE SIZE AND NUMBER OF CONDUCTORS SHOWN IN THESE DOCUMENTS.
13. THE LIGHTING PLANS INDICATE SWITCHING AND BRANCH CIRCUIT NUMBERS FOR ALL LIGHTING FIXTURES. LOWER CASE LETTERS AT SWITCHES AND LIGHTING FIXTURES INDICATE SWITCHING WHERE THE CONTROL PATTERN IS NOT OBVIOUS. INSTALL BRANCH CIRCUIT WIRING IN RACEWAY TO ALL RIGIDLY ATTACHED LIGHTING FIXTURES, AND TO JUNCTION BOXES FOR ALL LAY-IN LIGHTING FIXTURES, AS REQUIRED TO PROVIDE SWITCHING AND CIRCUITING AS SHOWN ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. ALL LAY-IN LIGHTING FIXTURES SHALL BE CONNECTED TO A BRANCH CIRCUIT JUNCTION BOX WITH A FLEXIBLE FIXTURE TAIL. A MAXIMUM OF FOUR FIXTURE TAILS SHALL BE CONNECTED TO A SINGLE JUNCTION BOX. FIXTURE TO FIXTURE WIRING OF LAY-IN LIGHTING FIXTURES IS NOT PERMITTED, EXCEPT WHERE MASTER/SLAVE FIXTURE PAIRS ARE INDICATED OR SPECIFIED.
15. THERE SHALL BE NO SPLICES OF WIRING INSIDE PANELBOARDS OR DISCONNECT SWITCHES. ONLY ONE WIRE SHALL BE TERMINATED TO ANY SINGLE LUG ON A CIRCUIT BREAKER.
16. ALL WIRING AND CONDUIT SIZES SHALL BE BASED ON THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE UNLESS OTHERWISE NOTED SPECIFICALLY.
17. UNLESS OTHERWISE NOTED, FOR LIGHTING AND RECEPTACLE HOMERUNS HAVING A TOTAL LENGTH OF 100' TO 200', USE #10 CONDUCTORS; FOR HOMERUNS HAVING A TOTAL LENGTH OF 200' OR GREATER, USE #8 CONDUCTORS.
18. COORDINATE THE REQUIREMENTS FOR OVERCURRENT PROTECTIVE DEVICE SIZE, DISCONNECT SWITCH SIZE, AND CONDUCTOR AND CONDUIT SIZES WITH THE REQUIREMENTS OF THE MECHANICAL EQUIPMENT THAT IS ACTUALLY TO BE INSTALLED AND PROVIDE AND INSTALL ALL ELECTRICAL COMPONENTS AS REQUIRED. THE ELECTRICAL COMPONENT SIZING SHOWN ON THESE DRAWINGS IS BASED UPON THE REQUIREMENTS FOR THE SPECIFIED MECHANICAL EQUIPMENT AVAILABLE AT THE TIME OF DESIGN. VARIATIONS IN REQUIREMENTS MAY OCCUR AS A RESULT OF THE PROVISION OF OTHER MANUFACTURER'S EQUIPMENT OR IN CHANGES TO THE SPECIFIED EQUIPMENT. SUCH REVISED REQUIREMENTS ARE A PART OF THIS CONTRACT AND SHALL BE ACCOMMODATED WITHOUT ADDITIONAL CHARGE.
19. FOR COORDINATION PURPOSES, LIGHTING FIXTURES AND DEVICES MAY BE MOVED A MAXIMUM DISTANCE OF FIVE FEET, PRIOR TO INSTALLATION, AT NO COST TO THE OWNER, UPON INSTRUCTION BY THE ARCHITECT OR ENGINEER.
20. COORDINATE THE EXACT LOCATION OF ALL THERMOSTATS, STARTERS, DISCONNECTS, ETC. AND COORDINATE ALL REQUIREMENTS FOR CONTROL AND POWER WIRING WITH THE MECHANICAL CONTRACTOR OR THE TRADE PROVIDING THE EQUIPMENT.
21. WHERE RECEPTACLES ARE SHOWN BACK-TO-BACK ON A COMMON WALL, OFFSET THE TWO BOXES AT LEAST SIX INCHES.
22. ALL CONDUCTORS SHALL BE THWN/THHN UNLESS OTHERWISE INDICATED. CONDUCTORS SHALL BE RATED FOR 75 DEGREES C. TERMINATIONS SHALL BE RATED FOR 75 DEGREES C. DEVIATIONS SHALL COMPLY WITH NEC ARTICLE 110-14(c) FOR EXACT EQUIPMENT BEING PROVIDED.
23. COORDINATE WITH AND PAY ALL FEES ASSOCIATED WITH OBTAINING SERVICE FORM ANY OF THE FOLLOWING UTILITIES RELATED TO THIS PROJECT.
    POWER COMPANY
    TELEPHONE COMPANY
    CABLE TELEVISION PROVIDER

LIGHTING

- A — LIGHTING FIXTURE - LETTER DENOTES TYPE
- A — WALL WASHER LIGHTING FIXTURE - LETTER DENOTES TYPE
- X — CEILING MOUNTED EXIT SIGN, ARROWS AS INDICATED - LETTER DENOTES TYPE, DARKENED AREA DENOTES LIGHTED FACE
- X — WALL MOUNTED EXIT SIGN, ARROWS AS INDICATED - LETTER DENOTES TYPE, DARKENED AREA DENOTES LIGHTED FACE
- C — STRIP LIGHT FIXTURE - LETTER DENOTES TYPE
- NIGHT LIGHT FIXTURE AND OR EMERGENCY FIXTURE
- POLE-MOUNTED SITE LIGHTING FIXTURE
- D — LIGHT FIXTURE - LETTER DENOTES TYPE
- F G — WALL MOUNTED LIGHT FIXTURE - LETTER DENOTES TYPE
- EMERGENCY BATTERY PACK LIGHTING FIXTURE

RECEPTACLES AND OUTLETS

- SIMPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V
- DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V "WP" DENOTES WEATHER-RESISTANT GFI RECEPTACLE IN WEATHERPROOF-IN-USE
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER OR BACKSPLASH
- QUADPLEX RECEPTACLE. NEMA 5-20R, 20A, 125V
- SPECIAL RECEPTACLE, NEMA CONFIGURATION OR EQUIPMENT PART NUMBER AS NOTED ON DRAWING
- F — FLOOR RECEPTACLE - "F" DENOTES FLUSH
- MULTI-OUTLET SURFACE RACEWAY WITH NEMA 5-20R,20A,125V RECEPTACLES 12" ON CENTER
- JUNCTION BOX

NOTE: ALL TELEPHONE, DATA OUTLET AND COMBINATION OUTLETS TO BE PROVIDED WITH OUTLET JUNCTION BOX AND 3/4"C WITH PULL STRING TO ABOVE CEILING FOR FUTURE WIRING

MOTORS AND CONTROLS

- MOTOR
- DISCONNECT SWITCH - "200/3/150" DENOTES AMPS/POLE/FUSE; "NF" DENOTES NON-FUSED
- MOTOR STARTER, NEMA SIZE AS NOTED
- COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER - "30/3/15/1" DENOTES AMPS/POLES/FUSE/ NEMA STARTER SIZE; "NF" DENOTES NON-FUSED
- $M — MANUAL MOTOR STARTER WITH THERMAL OVERLOAD
- PC — PHOTOCELL
- PUSH BUTTON
- START-STOP PUSH BUTTON CONTROL STATION
- OPEN-STOP-CLOSE PUSH BUTTON CONTROL STATION
- TC — TIME CLOCK

BASIS OF ELECTRICAL DESIGN

PRIMARY ELECTRICAL CODES :
ELECTRICAL: 2017 NATIONAL ELECTRICAL CODE WITH CITY AMENDMENTS.
ENERGY: 2018 TEXAS STATE ENERGY CODE WITH CITY AMENDMENTS.

ELECTRICAL EQUIPMENT

- SWITCHBOARD OR DISTRIBUTION PANEL
- PANELBOARD - FLUSH OR SURFACE MOUNT AS INDICATED ON PLAN SCHEDULE
- T — DRY-TYPE TRANSFORMER
- PLYWOOD TERMINAL BOARD, FOR TELEPHONE SYSTEM UNLESS NOTED, 4' X 8' X 3/4" UNLESS OTHERWISE NOTED

LIGHTING CONTROL

- $ — SWITCH, SPST, 20A, 120/277V
- $3 — SWITCH, 20A, 120/277V - "2" DENOTES DPST, "3" DENOTES THREE-WAY, "4" DENOTES FOUR-WAY
- $K — SWITCH, SPST, 20A, 120/277V - "K" DENOTES KEY SWITCH, "P" DENOTES PILOT LIGHT
- $D — DIMMER CONTROL SWITCH, 1000 WATT UNLESS OTHERWISE NOTED
- $S — SWEEP SWITCH
- $T — TIMER SWITCH WATT-STOPPER #TS-400 UNLESS OTHERWISE NOTED
- $O — WALL MOUNTED LINE VOLTAGE OCCUPANCY SENSOR WITH MANUAL CONTROL
- $a (B a) — LOWER CASE LETTERS ADJACENT TO FIXTURE INDICATE ASSOCIATED SWITCHING. EXAMPLE SHOWS FIXTURE TYPE "B" ON SWITCH "a"
- PUSHBUTTON

MISCELLANEOUS

- (1) — DRAWING NOTE REFERENCE (I.E., NOTES BY SYMBOL)

SPECIFIC EQUIPMENT CONNECTIONS

SUPPORT ELECTRICAL CONNECTION

H1A-1,3,5 — CIRCUIT DESIGNATION
(PUMP-1)(5HP,16.7FLA)(208/3) — INFORMATION PROVIDED (NAME)(LOAD)(VOLTAGE)
(60/3/35)(3#10,1#10G,3/4"C)(30AMPS) — CONNECTION (DISCONNECT)(WIRE)(FEEDER AMPS)
PROVIDE 1/2"C TO FIRE ALARM PANEL. — SPECIAL INSTRUCTIONS AND NOTES

ALTERNATE NOTE BY SYMBOL FORMAT
CIRCUIT(NAME)(LOAD)(VOLTAGE)(DISCONNECT)(WIRE)(AMPS)
SPECIAL INSTRUCTIONS AND NOTES

(#) H1A-1,3,5 (PUMP-1)(5HP,16.7FLA)(208/3) (60/3/35)(3#10,1#10G,3/4"C)(30AMPS)
PROVIDE 1/2"C TO FIRE ALARM PANEL.

DISCONNECT ABBREVIATIONS:
30/3/NF = AMPS/POLES/FUSE
W/UNIT = PROVIDED WITH UNIT
L/BKR = PROVIDE LOCKABLE CIRCUIT BREAKER
REC = RECEPTACLE
MRS = MOTOR RATED SWITCH
LTS = TOGGLE SWITCH WITH LOCKING CLASP

DESIGN IS BASED ON INFORMATION PROVIDED BY OTHER DIVISIONS. CONTRACTOR SHALL CONFIRM EQUIPMENT PURCHASED MEETS BASIS OF DESIGN SHOWN. COST ASSOCIATED WITH CHANGES TO PROVIDED INFORMATION SHALL BE THE RESPONSIBILITY OF THE DIVISION PROVIDING THE EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND DATA PRIOR TO ROUGH.

ABBREVIATIONS

A	AMPS	L	LENGTH
ACT	ABOVE COUNTERTOP	LB	POUNDS
AFF	ABOVE FINISHED FLOOR	LRA	LOCKED ROTOR AMPS
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AIC	AMPERE INTERRUPTING CURRENT	MAX	MAXIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MCA	MINIMUM CIRCUIT AMPACITY
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER
BKR	BREAKER	MH	METAL HALIDE
BLDG	BUILDING	MIN	MINIMUM
C	CONDUIT	MLO	MAIN LUGS ONLY
CKT	CIRCUIT	N/A	NOT APPLICABLE
CLG	CEILING	NEC	NATIONAL ELECTRICAL CODE
D	DEPTH	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
DEG	DEGREES		
DIS	DISCONNECT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DPDT	DOUBLE-POLE, DOUBLE-THROW		
DPST	DOUBLE-POLE, SINGLE-THROW	NO.	NUMBER
EA	EACH	N/O,N/C	NORMALLY OPEN, NORMALLY CLOSED
EPO	EMERGENCY POWER OFF	OC	ON CENTER
EWC	ELECTRIC WATER COOLER	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
FA	FIRE ALARM		
FACP	FIRE ALARM CONTROL PANEL	PDU	POWER DISTRIBUTION UNIT
FLA	FULL LOAD AMPS	PF	POWER FACTOR
FT.	FOOT, FEET	PH	PHASE
FVNR	FULL-VOLTAGE, NON-REVERSING	PROVIDE	FURNISH AND INSTALL
G	GROUND	PVC	POLYVINYL CHLORIDE
GA.	GAUGE	RE:	REFERENCE, REFER
GFI	GROUND FAULT CIRCUIT INTERRUPTER	RLA	RUNNING LOAD AMPS
		SPDT	SINGLE POLE DOUBLE THROW
GFR	GROUND FAULT RELAY	SPST	SINGLE POLE SINGLE THROW
GND	GROUND	THRU	THROUGH
GRS	GALVANIZED RIGID STEEL	TYP	TYPICAL
H	HEIGHT	U/F	UNDERFLOOR
HID	HIGH INTENSITY DISCHARGE	U/G	UNDERGROUND
HOA	HAND-OFF-AUTOMATIC	U/S	UNDERSLAB
HP	HORSEPOWER	UL	UNDERWRITERS LABORATORIES, INC.
HPS	HIGH PRESSURE SODIUM	U.O.N.	UNLESS OTHERWISE NOTED
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
			VOLT
HZ	HERTZ	VA	VOLT-AMPERE
IER	INTEGRATED EQUIPMENT RATING	VAC	VOLTS ALTERNATING CURRENT
IG	ISOLATED GROUND		WATT, WIDTH
IN.	INCH, INCHES	W/	WITH
J-BOX	JUNCTION BOX	W/O	WITHOUT
kcmil	1000 CIRCULAR MILS	WP	WEATHERPROOF DEVICE. RECEPTACLES SHALL BE WEATHER-RESISTANT TYPE GFI RECEPTACLES IN WEATHERPROOF WHILE IN-USE BOX.
kV	KILOVOLT		
kVA	KILOVOLT-AMPS		
kVAR	KILOVOLT-AMPS REACTIVE		
kW	KILOWATT	XFMR	TRANSFORMER
kWH	KILOWATT-HOUR		

MOUNTING HEIGHTS

TOGGLE AND DIMMER SWITCHES:
- 48" AFF TO CENTER OF SWITCH

RECEPTACLES:
- FINISHED AREAS-18" AFF TO CENTER OF RECEPTACLE
- UNFINISHED AREAS-48" AFF TO CENTER OF RECEPTACLE
- WATER COOLERS-DIRECTLY BEHIND COOLER - COORDINATE ELEVATION WITH THE COOLER TO BE INSTALLED PRIOR TO ROUGH-IN
- ABOVE COUNTER -6" ABOVE COUNTER OR BACKSPLASH TO CENTER OF RECEPTACLE

WALL MOUNTED EMERGENCY LIGHTING FIXTURES:
- 84" AFF TO CENTER OF FIXTURE

THERMOSTATS:
- 48" AFF TO HIGHEST OPERABLE PART

BRANCH CIRCUIT WIRE SCHEDULE

BRANCH SIZE	COPPER WIRE SIZE	CONDUIT SIZE	BRANCH SIZE	COPPER WIRE SIZE	CONDUIT SIZE
20 AMP	2 #12, 1#12G.	1/2"	50 AMP	2 #8, 1#10G.	3/4"
30 AMP	2 #10, 1#10G.	1/2"	60 AMP	2 #6, 1#10G.	1"
35 AMP	2 #10, 1#10G.	1/2"	70 AMP	2 #4, 1#10G.	1"
40 AMP	2 #8, 1#10G.	3/4"	80 AMP	2 #4, 1#10G.	1"
45 AMP	2 #8, 1#10G.	3/4"	90 AMP	2 #3, 1#10G.	1-1/4"

1. WIRE SIZES ARE BASED ON N.E.C. TABLE 310-16, 75 DEGREE C COLUMN.
2. CONDUIT SHALL BE USED AS REQUIRED BY LOCAL CODE.
3. PROVIDE 3 CONDUCTOR WIRE WITH GROUND WHERE REQUIRED FOR APPLIANCES. ADJUST CONDUIT SIZE AS REQUIRED BY CODE.

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
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REGISTERED PROFESSIONAL ENGINEER

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Texas Registration # F-10963

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL LEGENDS & NOTES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E0.01

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LIGHTING CONTROL DEVICE SCHEDULE

SYMBOL	TYPE OF CONTROL
$	LINE VOLTAGE TOGGLE SWITCH
$3	LINE VOLTAGE 3-WAY TOGGLE SWITCH
$4	LINE VOLTAGE 4-WAY TOGGLE SWITCH
$D	LINE VOLTAGE SLIDE DIMMER SWITCH WITH ON/OFF BUTTON.
$T	LINE VOLTAGE TIMER SWITCH
$	WALL MOUNTED LINE VOLTAGE OCCUPANCY SENSOR, 3-BUTTON (ON/OFF,RAISE,LOWER) DIMMING SENSOR. PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
$V	WALL MOUNTED LINE VOLTAGE VACANCY SENSOR, 1-BUTTON (ON/OFF). PROGRAM TO MANUAL 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
$V VD	WALL MOUNTED LINE VOLTAGE VACANCY SENSOR, 3-BUTTON (ON/OFF, RAISE, LOWER) DIMMING SENSOR. PROGRAM TO MANUAL 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
$F	WALL MOUNTED LINE VOLTAGE VACANCY SENSOR PER ZONE (ON/OFF) SENSOR. PROGRAM TO AUTOMATIC 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
BD	WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON 3-BUTTON PER ZONE (ON/OFF,RAISE,LOWER). PROGRAM TO AUTOMATIC 50% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
BV	WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON PER ZONE (ON/OFF). PROGRAM TO MANUAL 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY VACANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
BF	WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON PER ZONE (ON/OFF). PROGRAM TO AUTOMATIC 100% ON, AUTOMATIC OFF AFTER 30 MINUTES. DUAL TECHNOLOGY OCCUPANCY SENSORS AS SHOWN IN PLAN VIEW. LOWER CASE LETTERS ADJACENT TO SWITCH INDICATES ZONES.
(DT) (PI) (US)	CEILING MOUNTED DIGITAL OCCUPANCY SENSORS COMPATIBLE WITH DIGITAL BUTTON CONTROL SHOWN. PI= PASSIVE INFRARED, US=ULTRASONIC, DT=DUAL TECH.
(DT) (PI) (US)	WALL MOUNTED DIGITAL OCCUPANCY SENSORS COMPATIBLE WITH DIGITAL BUTTON CONTROL SHOWN. PI= PASSIVE INFRARED, US=ULTRASONIC, DT=DUAL TECH.
B	NETWORK TIME BASED DIGITAL CONTROL, SCHEDULE PROGRAMMING PER OWNERS DIRECTIVE. WALL MOUNTED LOW VOLTAGE DIGITAL BUTTON PER ZONE (ON/OFF). ALL BUTTONS TO FUNCTION DURING OPERATIONAL TIME AS ON/OFF. AFTER HOURS BUTTONS ARE TO PROVIDE SAME FUNCTION BUT BE LIMITED TO 2-HOUR MAXIMUM ON.
(PC)	CEILING MOUNTED DIGITAL DAY-LIGHTING SENSOR. SENSOR TO AUTOMATICALLY DIM FIXTURES LOCATED WITHIN ZONE SHOWN IN RESPONSE TO AMBIENT LIGHT LEVELS. EXEMPT ZONES LESS THAN 150W PER SPACE ARE NOT SHOWN IN PLAN.
a	TIME CLOCK EXTERIOR CONTROLS. LOWER CASE LETTER INDICATES ASSOCIATED ZONE. EACH ZONE TO GET DEDICATED TIME CONTROL. TIME CLOCKS MAY BE COMBINED INTO SINGLE DEVICE WITH INDEPENDENT SCHEDULES, COMBINED DEVICES SHALL PROVIDE A MINIMUM 20% SPARES.

LIGHTING CONTROL BY SYMBOL (##)

PLAN VIEW SYMBOLOGY	DESCRIPTION	APPLICABLE CODES	CONTROL METHOD
(SM) $	"SMALL" OFFICES AND SIMILAR SPACES WITH ONLY ONE ENTRY / EXIT NO EMERGENCY LIGHTING REQUIRED. AUTOMATIC ON TO 50%, AUTO-OFF SENSOR OPERATION.	LIMITATIONS: IECC EXCEPTION FOR OCCUPANCY SENSORS. LIMITED TO 2500 SQ.FT. MAX	2-BUTTON WALL OCCUPANCY SENSOR WITH DIMMING
(DLC) (P1) (D1)	LARGE ROOM DIGITAL LIGHTING CONTROL NUMBER OF ZONES DEFINED BY NUMBER OF BUTTON AND POWER PACK CIRCUITS. PROGRAM FOR MANUAL ON AUTO OFF		DLC LIGHTING LOW VOLTAGE OCCUPANCY SENSORS REFER TO DLC DETAIL THIS SHEET
(SR) $	"SAFETY RELATED AREAS FOR WHICH AUTOMATIC OFF LIGHTING WOULD PRESENT A SAFETY HAZZARD.	LIMITATIONS: IECC EXCEPTION AREAS FOR WHICH AUTOMATIC OFF OF LIGHTING WOULD CREATE A SAFETY HAZZARD. ON/OFF LOCAL CONTROL ONLY REQUIRED.	LINE VOLTAGE SWITCH ONLY
(EP) $	EGRESS PATH RELATED AREAS FOR WHICH AUTOMATIC OFF LIGHTING WOULD VIOLATE BUILDING LIFE SAFETY CODE.	LIMITATIONS: IECC EXCEPTION EGRESS PATHS ARE ONLY ALLOWED OFF DURING UNOCCUPIED HOURS PER BUILDING LIFE SAFETY CODE.	LINE VOLTAGE STANDARD LIGHT SWITCHES LOCATED IN IT CLOSET OR CUSTODIAL ROOM.
(DR)	DAY-LIGHTING REQUIRED ZONE	LIMITATIONS: DAY-LIGHTING REQUIRED ON DEDICATED SWITCH.	
	DAY-LIGHTING EXEMPT ZONE	LIMITATIONS:	
(DE1)	DE1 = NOT REQUIRED IN EGRESS PATHS	EXEMPT PER C405.2.1.1, EXCEPTION 2.	
(DE2)	DE2 = TWO OR FEWER FIXTURES	EXEMPT PER C405.2.2.3, EXCEPTION.	
(DE3)	DE3 = ALL LIGHTING IS WITHIN THE SAME ZONE	EXEMPT PER C405.2.2.2. AS OVERRIDING MEANS OF CONTROL.	

GENERAL NOTES APPLY TO ALL ZONES:

1. SENSOR LOCATIONS ARE MINIMUMS, CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 10% ADDITIONAL DEVICES TO COVER DARK SPOTS DISCOVERED DURING CONSTRUCTION FROM FIELD INSTALLED OBSTRUCTIONS. CONTRACTOR SHALL ALSO ALLOW FOR A MOVE OF UP TO 5'-0" IN ANY DIRECTION FOR ALL SENSORS AT NO ADDITIONAL COST TO THE OWNER, TO ALLOW FOR FIELD ADJUSTMENT OF SENSOR PLACEMENTS TO ACHIEVE OPTIMUM PERFORMANCE.
2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 SITE VISITS BY FACTORY TRAINED PERSONNEL TO ADJUST AND TRAIN THE OWNER ON USE AND MAINTENANCE OF ALL LIGHTING CONTROL COMPONENTS.

PARTIAL ENERGY CODE REQUIREMENTS

GENERAL ENERGY CODE REQUIREMENTS :

ALL AREAS LISTED BELOW ARE TO HAVE OCCUPANCY SENSOR CONTROLS.
CLASSROOMS/LECTURE/TRAINING ROOMS
CONFERENCE/MEETING/MULTIPURPOSE ROOMS
COPY/PRINT ROOMS
LOUNGES
EMPLOYEE LUNCH AND BREAK ROOMS
PRIVATE OFFICES
RESTROOMS
STORAGE ROOMS
JANITORIAL CLOSETS
LOCKER ROOMS
OTHER ENCLOSED SPACES 300 SQ.FT. OR LESS
WAREHOUSES(WAREHOUSE TO BE SENSORED BY AISLEWAY)

ALL SENSORS TO FUNCTION MANUAL ON AUTOMATIC OFF.
AUTOMATIC ON MAY BE USED IF "ON" LEVEL IS LESS THAN 50% OF THE TOTAL ILLUMINATION PROVIDED BY LIGHTING IN AREA
AUTOMATIC ON TO 100% IS ALLOWED FOR PUBLIC CORRIDORS, LOBBIES AND SIMILAR PUBLIC USE ONLY AREAS

AREAS NOT PROVIDED WITH OCCUPANCY SENSORS AS LISTED ABOVE SHALL BE ON TIME BASED SCHEDULE. TIME SWITCH CONTROLS SHALL PROVIDE MAXIMUM 2-HOUR OVERRIDE (MAXIMUM 5000SQ.FT EACH OVERRIDE) WITHIN SPACE CONTROLLED OR HAVE A PILOT LIGHT AND MAP OF LIGHTING CONTROLLED.

MALLS, ARCADES, AUDITORIUMS, SINGLE TENANT RETAIL, INDUSTRIAL FACILITIES AND ARENA ARE EXEMPT FROM THE 2-HOUR LIMIT ON OVERRIDE TIME AND MAY CONTROL SPACES UP TO 20,000 SQ.FT.

AREAS NOT EXEMPTED FROM TIME BASE CONTROLS SHALL HAVE REDUCTION CONTROLS LOCATED IN SPACE FOR MINIMUM 50% REDUCTION BY OCCUPANT. LIGHTING REDUCTION IS NOT REQUIRED FOR ROOMS WITH ONLY ONE LIGHT FIXTURE, ROOMS USING LESS THAN .6W/SQ.FT. CORRIDORS, EQUIPMENT ROOMS, PUBLIC LOBBIES.

TIME CONTROLS MUST BE CAPABLE OF
7-DAY CLOCK WITH DIFFERENT SCHEDULE EACH DAY
HAVE HOLIDAY SCHEDULING CAPABILITY
10 HOUR BACKUP FOR PROGRAMMING

AREAS THAT HAVE SPECIAL EXEMPTIONS THAT MUST BE EVALUATED ON A CASE-BY-CASE BASIS:
-SLEEPING AREAS: RESIDENTIAL OR FIREMAN TYPE SLEEPING AREAS.
-PATIENT CARE AREAS.
-AREAS WHERE AUTOMATIC LIGHTING SHUTOFF WOULD ENDANGER LIFE SAFETY.
-DWELLING UNITS WITHIN COMMERCIAL BUILDINGS.
-WALK-IN COOLER AND FREEZERS.

EXTERIOR LIGHTING ENERGY CODE REQUIREMENTS :

ALL EXTERIOR LIGHTING SHALL BE CONTROLLED AS A FUNCTION OF AVAILABLE LIGHT , LIGHTING SHALL BE REDUCED BY MINIMUM OF 30% AFTER MIDNIGHT AT THE LATEST TO 6AM. OR 1-HOUR AFTER CLOSING AND 1 HOUR BEFORE BUSINESS OPENING. OR ANYTIME OF INACTIVITY OF MORE THAN 15 MINUTES.

EXEMPTIONS TO EXTERIOR LIGHTING.
EMERGENCY EGRESS LIGHTING
COVERED VEHICLE ENTRANCES TO PARKING STRUCTURES.
BUILDING FACADE(AFFECT LIGHTING) OR LANDSCAPE LIGHTING MAY BE PHOTOCELL ONLY.

AREAS DETERMINED TO BE SAFETY RELATED WHICH AUTOMATIC LIGHTING CONTROLS WOULD ENDANGER LIFE SAFETY OR ARE EXEMPT FOR EGRESS RELATED LIFE SAFETY CONCERNS ARE INDICATED IN THE ROOM BY THE FOLLOWING SYMBOLS (SR)

LIGHTING CTRL DEVICE SCHEDULE

SYMBOL	TYPE OF SENSOR	RATING
$	WALL MOUNTED PASSIVE IR SENSOR	120V-800W 277V-1200W
B1 B2 B3 B4	WALL MOUNTED DIGITAL CONTROL BUTTONS NUMBER INDICATES QUANTITY OF BUTTONS AND CORRESPONDING ZONES.PLAN VIEW ZONES ARE INDICATED BY FIXTURE WITH LOWER CASE LETTERS	DIGITAL
(P1) (D1)	ROOM CONTROLLER/POWER PACK 1 = 1 ZONE ON/OFF, 2 = 2 ZONE...8 = 8 ZONES... 1 - ZONE DIMMING, 2=2 ZONE...8 = 8 ZONES...	20 AMPS
(PI)	CEILING MOUNTED PASSIVE INFRARED SENSOR	DIGITAL
(DT)	CEILING MOUNTED DUAL TECHNOLOGY ULTRASONIC/PASSIVE INFRARED SENSOR	DIGITAL
(PC)	CEILING MOUNTED DAYLIGHT SENSOR	DIGITAL

1. GENERAL NOTES APPLY TO ALL DEVICES:
2. ALL DEVICES ARE TO BE WHITE COLOR ON FINISHED WALLS AND GREY ON CONCRETE WALLS.
3. ALTERNATE SENSOR LAYOUT AND WIRING WILL BE CONSIDERED. LAYOUT AND DESIGN WILL BE THE RESPONSIBILITY OF MANUFACTURER.

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
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REGISTERED PROFESSIONAL ENGINEER
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No.	Description	Date
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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E0.02

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LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE OF LUMINAIRE	MANUFACTURER & CATALOG NUMBER	LAMPS	INPUT WATTAGE	INPUT VOLTAGE	MOUNTING	REMARKS
A2	2X2	LITHONIA: 2GTL2-33L-EZ1-LP835	30 WATT LED	30	120V	2X2 GRID	
A4	2X4	LITHONIA: 2GTL4-48L-EZ1-LP835	36 WATT LED	36	120V	2X2 GRID	
B	DOWNLIGHT	LITHONIA: LDN4-35/10-LO4-AR-LSS-MVOLT-GZ10	13 WATT LED	13	120V	FLUSH	
C	DOWNLIGHT	LITHONIA: LDN4-35/10-LO4-AR-LSS-MVOLT-GZ10-WL	13 WATT LED	13	120V	FLUSH	
C1	DOWNLIGHT	LITHONIA: LDN4-40/10-LO4-AR-LSS-MVOLT-GZ10-WL	13 WATT LED	13	120V	FLUSH	
C2	DOWNLIGHT	LITHONIA: LDN4-30/10-LO4-AR-LSS-MVOLT-GZ10-WL	13 WATT LED	13	120V	FLUSH	
CF	CEILING FAN	LITTLETON: 42" INDOOR CEILING FAN	50 WATT	50	120V	FLUSH	
D	LINEAR	LITHONIA: IBG-24000LM-HEF-AFL-GND-MVOLT -GZ10-40K-90CRI-DWH	136 WATT LED	136	120V	FLUSH	
DE	EMERGENCY NOTIFICATION DOWNLIGHT	WINONA: MINIMARKER-RND-INT-LSR1-RED-MVOLT- OA-FINISH COLOR	4 WATT LED	4	120V	FLUSH	NOTE 3
G	10" PENDANT	CONTECH LIGHTING: CGLE-35-MVD2-A-RS-P-120V-LED CLEAR PRISMATICK ACRYLIC	38 WATT LED	18	120V	FLUSH	
H5	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-5ft-5in	38 WATT LED	38	120V	FLUSH	
H6	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-6ft-1in	38 WATT LED	38	120V	FLUSH	
H8	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-7ft-7in	38 WATT LED	38	120V	FLUSH	
H9	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-8ft-9in	38 WATT LED	38	120V	FLUSH	
H13	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-13ft-3in	38 WATT LED	38	120V	FLUSH	
H14	WALL MOUNTED LINEAR STRIP	FOCAL POINT: FSM1BW-DCFL-375DN-375UP-35K-1C-UNV -L11-WM-BK-13ft-10in	38 WATT LED	38	120V	FLUSH	
L1	COVE LIGHTING	ECOSENSE: L35-I-12"-02-35-80-MULT-120	2 WATT LED	2	120V	SURFACE	
L10	COVE LIGHTING	ECOSENSE: (2) L35-I-12"-02-35-80-MULT-120 (2) L35-I-48"-02-35-80-MULT-120	20 WATT LED	20	120V	SURFACE	NOTE 2
L24	COVE LIGHTING	ECOSENSE: (6) L35-I-48"-02-35-80-MULT-120	48 WATT LED	48	120V	SURFACE	NOTE 1
P	NIGHT LIGHT W/EMERGENCY NOTIFICATION	ALW: SP4W S3 MED 80 MOD 3500K & RED 2 X 0/10V/0% CR/S MED 80 3500K 0/10V/0% CR/S WH UNV MOD	30 WATT LED	30	120V	FLUSH	
Q	READING LIGHT	LUMENS OB-C SNAIK WALL MATT NICKEL 22" FLEX READING LIGHT	7 WATT LED	7	120V	FLUSH	
S	LINEAR	LITHONIA: ZL1N-L48-5000LM-FST-MVOLT-35K-80CRI -SF-DBLXD	38 WATT LED	38	120V	FLUSH	
X	EXIT LIGHT	LITHONIA: LRP-2-GW-120/277	3W LED INCLUDED	3	120V	WALL / CEILING	
OA	POLE LIGHT	LITHONIA: RSX1 LED-P3-30K-R3-MVOLT-SPA-DDBTXD	109W LED	110	208V	POLE	
OG	WALL MOUNTED	LITHONIA: TWR1 LED-ALO-40K-MVOLT-PE-DDBTXD	24W LED	24	120V	WALL	NOTE 4
OP	IN GRADE UP LIGHT	PARADOX: PDX10-BSS-18LED-WHT30K-MVOLT-NSP-FLC -34S-LDIM	22W LED	22	120V	IN GRADE	

NOTES:

1. FINAL FIXTURE IS CREATED BY CHAINING TOGETHER MULTIPLE 48" FIXTURES TOGETHER.
2. FINAL FIXTURE IS CREATED BY CHAINING TOGETHER MULTIPLE 12" & 48" FIXTURES TOGETHER.
3. COORDINATE WITH ARCHITECT FOR FINAL TRIM-FINISH COLOR.
4. PROVIDE ALO LUMEN PACKAGE 4, FOR 3000 LUMEN OUTPUT AT 24 WATTS.
5. PROVIDE WALL MOUNTING HARDWARE IN ADDITION TO OTHER HARDWARE NEEDED TO CREATE A SEAMLESS WRAP-AROUND FIXTURE. CONTRACTOR SHALL FIELD VERIFY EXACT DIMENSIONS NEEDED PRIOR TO PURCHASING.

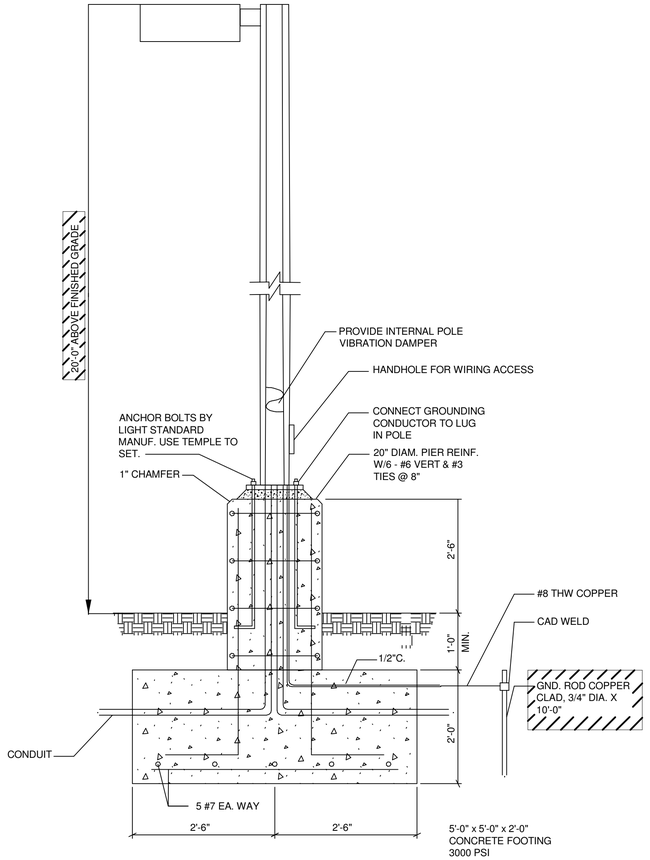
GENERAL NOTES APPLY TO ALL FIXTURES:

a. WALL AND CEILING MOUNTED EXIT SIGN FIXTURES SHALL BE MOUNTED ABOVE DOORS. FIXTURES TO HAVE EMERGENCY OPERATION FEATURE AND SELF-TEXTING/DIAGNOSTIC ELECTRONICS.

b. ALL EXTERIOR LED FIXTURES TO HAVE DIMMING DRIVERS TO COMPLY WITH 2018 IECC.

c. PROVIDE ALL REQUIRED MOUNTING HARDWARE AND TRIM FOR CEILING TYPE FIXTURE IS MOUNTED IN.

d. FIXTURE FINISHES SHALL BE APPROVED BY ARCHITECT AND/OR OWNER'S REPRESENTATIVE.



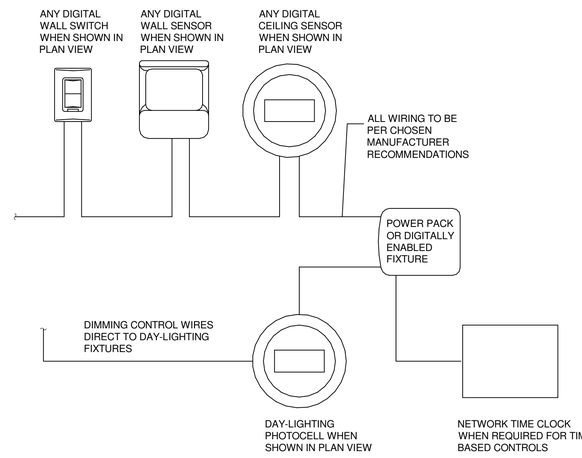
2 LIGHT POLE DETAIL

NTS

GENERAL NOTES APPLY TO ALL :

1. SENSOR LOCATIONS ARE MINIMUMS, CONTRACTOR SHALL PROVIDE FOR A MINIMUM OF 10% ADDITIONAL DEVICES TO COVER DARK SPOTS DISCOVERED DURING CONSTRUCTION FROM FIELD INSTALLED OBSTRUCTIONS. CONTRACTOR SHALL ALSO ALLOW FOR A MOVE OF UP TO 5'-0" IN ANY DIRECTION FOR ALL SENSORS AT NO ADDITIONAL COST TO THE OWNER, TO ALLOW FOR FIELD ADJUSTMENT OF SENSOR PLACEMENTS TO ACHIEVE OPTIMUM PERFORMANCE.

2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 SITE VISITS BY FACTORY TRAINED PERSONNEL TO ADJUST AND TRAIN THE OWNER ON USE AND MAINTENANCE OF ALL LIGHTING CONTROL COMPONENTS.



NOTE:
ALL POWER PACKS TO BE MOUNTED ABOVE CEILING NEAREST THE FIRST WALL SWITCH SERVING THE ASSOCIATED ROOM. PLAN VIEW SHOWS QUANTITY OF ZONES REQUIRED MANUFACTURER MAY COMBINE POWER PACKS WHERE POSSIBLE INTO MULTI ZONE POWER PACKS.
ALL EMERGENCY BATTERY PACK DECORATIVE FIXTURES ARE TO TURN ON/OFF WITH ASSOCIATED ROOM, BUT OVERRIDE TO ON IF POWER IS LOST.
ALL EXIT LIGHTING AND BATTERY PACK ONLY FIXTURES ARE TO BE WIRED TO UN-SWITCHED LEG OF CIRCUITS SHOWN FOR CONSTANT POWER.

"DLC" SEQUENCE OF OPERATION:

SENSOR SHALL TURN LIGHTS OFF IF ROOM IS VACANT FOR MORE THAN 30 MIN.

SENSOR WILL TURN LIGHTS ON WHEN WALL SWITCH IS ACTIVATED.

EACH ZONE INDICATED REQUIRES 1 BUTTON FOR ON/OFF CONTROL.

EMERGENCY LIGHTING:
EMERGENCY LIGHTING SHOWN SHALL OPERATE WITH NORMAL LIGHTING IN THE AREA AND BE FORCED ON IN THE EVENT OF A POWER LOSS.

DESIGN REFERENCE:
DETAIL IS GENERIC IN NATURE. PLAN VIEWS WILL INDICATE NUMBER OF ZONES WITH NUMBER/TYPE OF POWER PACK ZONES REQUIRED. PLAN VIEW WILL INDICATE LOCATION OF DIGITAL WALL SWITCHES WITH NUMBER OF BUTTONS REQUIRED. EACH MANUFACTURER IS DIFFERENT IN DEVICES AVAILABLE AND WIRING. ACCEPTABLE MANUFACTURERS ARE WATT STOPPER , LUTRON AND ACUITY CONTROLS. OTHERS WILL BE CONSIDERED WITH PRE-APPROVAL PRIOR TO BIDDING.

1 LIGHTING CONTROLS DETAIL

NTS

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL SCHEDULES AND DETAILS



264.11.11.2019.19024

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SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E0.03

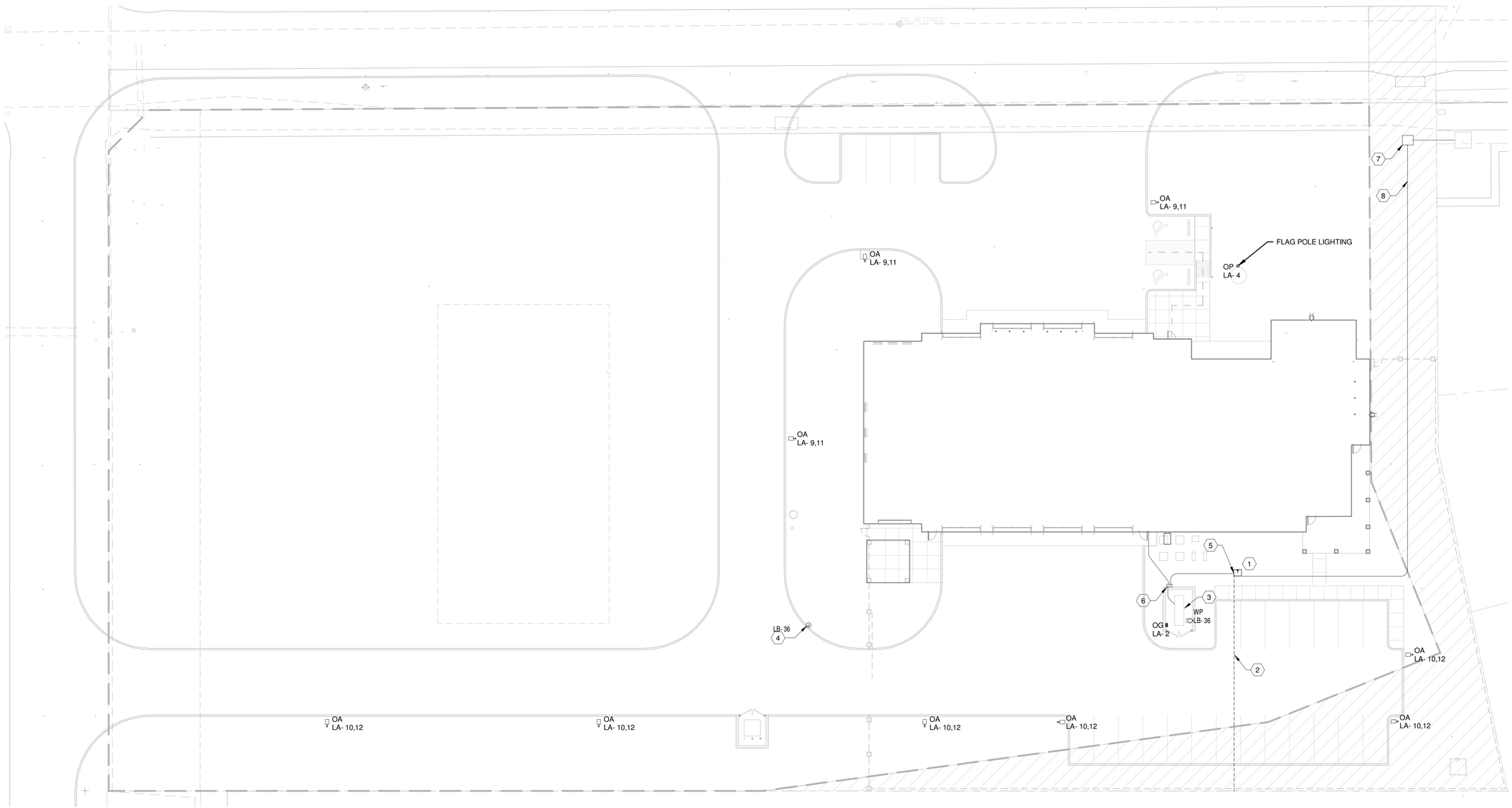
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E1.01 NOTES BY SYMBOL

NUMBER	NOTE
1	PROPOSED TRANSFORMER LOCATION.
2	CONTRACTOR SHALL PROVIDE TWO (2) 4" CONDUITS FROM UTILITY TRANSFORMER TO SOUTH PROPERTY LINE. COORDINATE EXACT REQUIREMENTS WITH UTILITYT PROVIDER PRIOR TO INSTALLATION.
3	LOCATION OF BUILDING BACK-UP GENERATOR. REFER TO E6.01 FOR MORE INFORMATION.
4	J-BOX FOR MOTORIZED GATE AND KEYPAD.
5	UTILITY METER SHALL BE MOUNTED ON TRANSFORMER. REFER TO ONE-LINE DIAGRAM ON E6.01 FOR MORE INFORMATION.
6	LOCATION OF AUTOMATIC TRANSFER SWITCH. PROVIDE NEMA 3R ENCLOSURE AND REFER TO E6.01 FOR ADDITIONAL INFORMATION.
7	LOCATION OF PRIMARY PULL BOX. COORDINATE WITH ONCOR (JON HUTCHASON) FOR EXACT REQUIREMENTS.
8	PROPOSED ROUTING OF UTILITY PRIMARY. COORDINATE WITH ONCOR (JON HUTCHASON) FOR EXACT REQUIREMENTS

E1.01 GENERAL NOTES

1	CONTACT UTILITY PROVIDER SHOWN BELOW FOR DESIGN INFORMATION AS REQUIRED. EXACT LOCATION OF NEW PAD MOUNTED TRANSFORMER SHALL BE COODINATED IN FIELD WITH DESIGNER. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ONCOR'S DESIGN GUIDELINES, ECT.
2	ONCOR PROJECT DESIGNER: JON HUTCHASON, EMAIL: JONATHAN.HUTCHASON@ONCOR.COM, PHONE: 254-721-1891.
3	REFER TO LIGHTING CONTROLS DETAILS ON E3.01 FOR CONTROLS LAYOUT.



1 E1.01 SITE PLAN - ELECTRICAL
1" = 20'-0"

N

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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

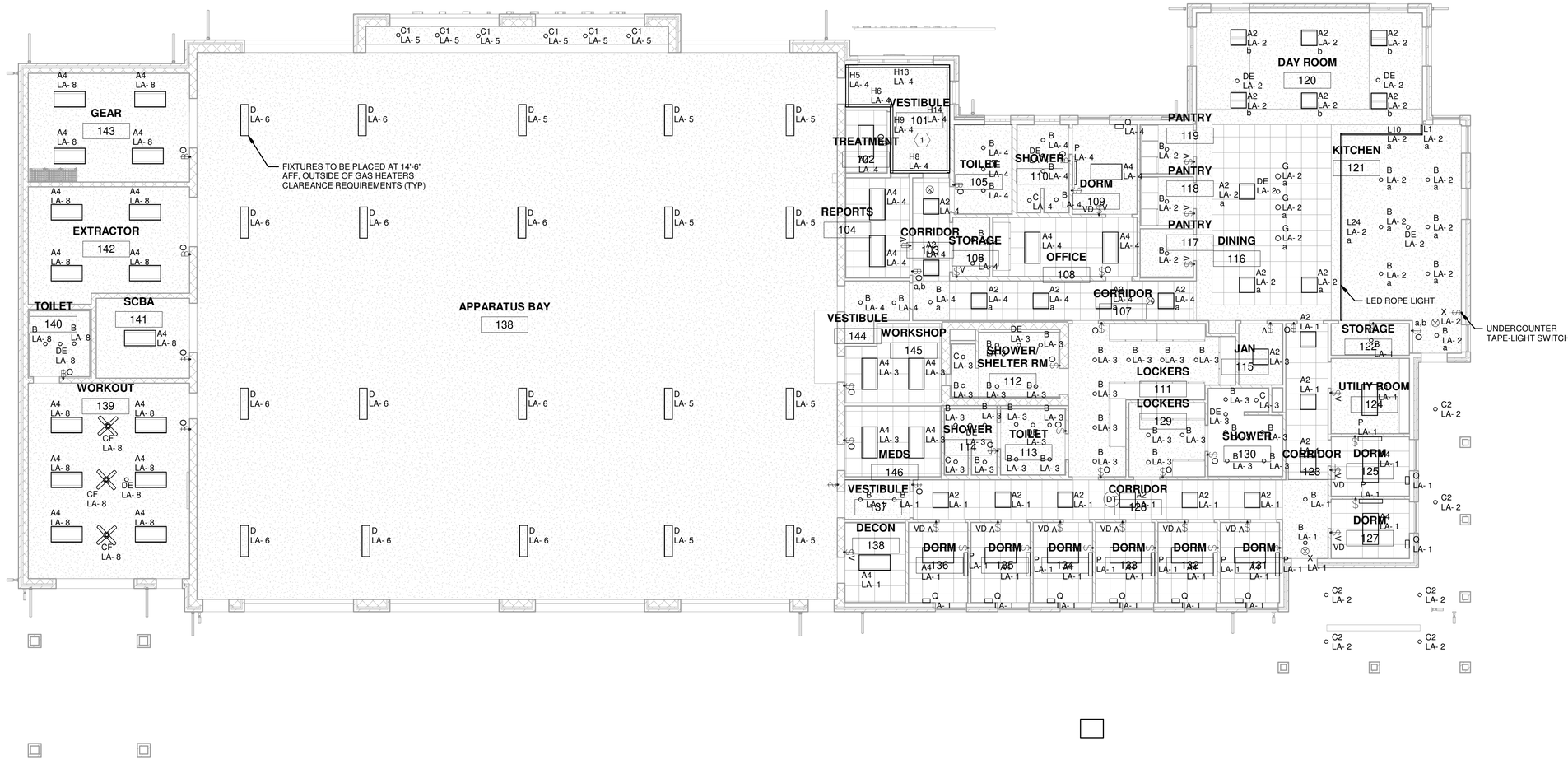
SITE PLAN - ELECTRICAL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E1.01

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E2.01 NOTES BY SYMBOL	
NUMBER	NOTE
1	FIXTURES IN VESTIBULE SHALL BE WALL MOUNTED AT AN ELEVATION OF 18'-8" TO THE BOTTOM OF THE FIXTURE. REFER TO DETAILS 2-5 ON A5.08 FOR ADDITIONAL INFORMATION.

E2.01 GENERAL NOTES	
1	FINAL LOCATIONS OF EXIT SIGNS AND EMERGENCY LIGHTING ARE SUBJECT TO THE APPROVAL OF THE GOVERNING JURISDICTION. ANY RELOCATION SHALL BE AT THE CONTRACTOR'S EXSPENSE
2	FIXTURES "DE" ARE RED DOWN LIGHTS AND SHALL BE CONNECTED TO THE EMERGENCY NOTIFICATION SYSTEM FOR THE FIRE STATION. REFER TO INTERIOR LIGHTING CONTROLS SHEET E3.02 FOR ADDITIONAL INFORMATION.
3	REFER TO LIGHTING CONTROLS DETAILS ON E3.02 FOR CONTROLS LAYOUT.



1 E2.01 FLOOR PLAN - ELECTRICAL LIGHTING
1/8" = 1'-0"

N

8' 0' 8' 16'
1/8" = 1'-0"

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FLOOR PLAN - ELECTRICAL LIGHTING

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E2.01

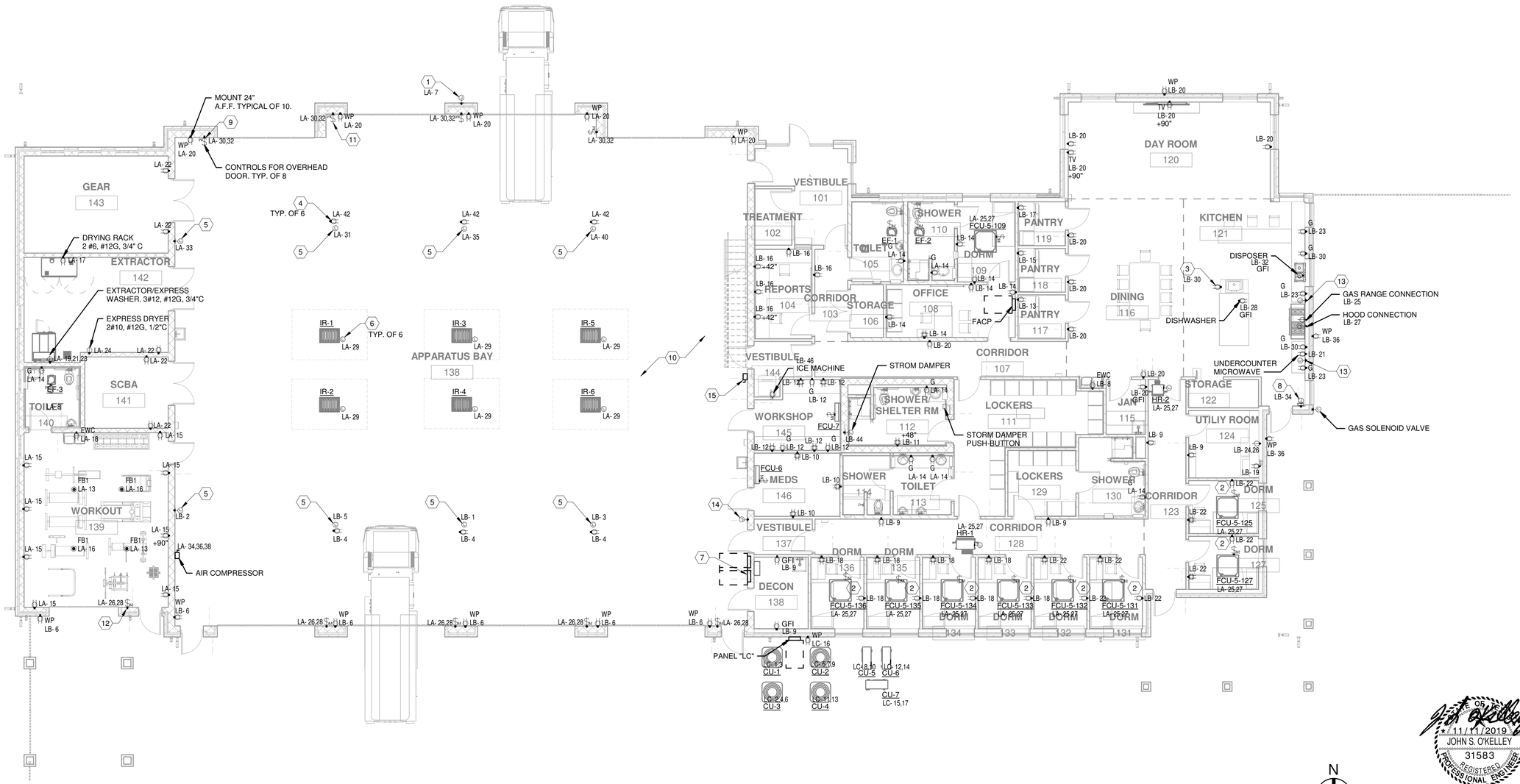
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E2.02 GENERAL NOTES

1	ALL RECEPTACLES LABELED BY THE LETTER "G" SHALL BE GFI PROTECTED AND MOUNTED 6" ABOVE COUNTER.

E2.02 NOTES BY SYMBOL

NUMBER	NOTE
1	J-BOX FOR BACK-LIT SIGNAGE. REFER TO A2.01 FOR EXACT LOCATION AND COORDINATE EXACT REQUIREMENTS WITH ARCHITECT. VERIFY EXACT ELECTRICAL REQUIREMENTS PRIOR TO INSTALLATION. ROUTE 2#10, #12G IN 1/2"CONDUIT.
2	MOUNT RECEPTACLE 12" BELOW CIELING
3	PROVIDE GFI PROTECTION AND MOUNT 6" BELOW COUNTER-TOP SURFACE.
4	PROVIDE POWER REEL DROP DOWN RECEPTACLE. MOUNT TO CEILING STRUCTURE. COORDINATE FINAL LOCATION WITH OWNER.
5	PROVIDE J-BOX FOR DROP DOWN PLUG. MOUNT TO CEILING STRUCTURE/WALL. PROVIDE NEMA L10-30R RECEPTACLE AND COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION. REFER TO E6.02 FOR ADDITIONAL DETAILS.
6	PROVIDE J-BOX FOR CONTROLS FOR INFIRED HEATERS. PROVIDE 2#10, #12G, 1/2" C
7	PROPOSED LOCATION OF 2-SECTION PANEL "LA/LB".
8	LOCATION OF POWER FOR UTILITY CONTROLER. GAS SOLENOID VALVE SHALL BE POWERED THROUGH CONTROLLER.
9	BASIS OF DESIGN FOR OVERHEAD DOOR IS A 1HP MOTOR AT 208V, 1-PHASE. CONTRACTOR SHALL VERIFY EXACT ELECTRICAL REQUIREMENTS FOR OVERHEAD DOORS PRIOR TO INSTALLATION.
10	COORDINATE EXACT LOCATION AND REQUIREMENTS FOR ALL OVERHEAD POWER IN APPARATUS BAY WITH OWNER PRIOR TO INSTALLATION.
11	FOR NORTH OVERHEAD DOORS, PROVIDE POWER USING 2#8, #10G, 3/4"C
12	FOR SOUTH OVERHEAD DOORS, PROVIDE POWER USING 2#6, #10G, 1"C
13	RECESSED J-BOX FOR TWO FLOATING SHELF TAPE LIGHTS. COORDINATE WITH ARCHITECT FOR EXACT SPECIFICATION. COLOR TEMPERATURE SHALL BE 3500K. POWER USING LIGHTING CIRCUIT LA-5. REFER TO DETAILS 16/A5.05 & 5/A5.10 FOR ADDITIONAL DETAILS.
14	J-BOX FOR 5-HP EXHAUST FAN (EF-4). PROVIDE 30A NON-FUSED DISCONNECT AND REFER TO MECHANICAL FOR EXACT LOCATION.
15	FUSED DISCONNECT FOR MECHANICAL EXHAUST FAN CONTROL SYSTEM. REFER TO MECHANICAL FOR MORE INFORMATION.



1 E2.02 FLOOR PLAN - ELECTRICAL POWER
1/8" = 1'-0"

N

8' 0' 8' 16'
1/8" = 1'-0"

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KOMATSU ARCHITECTURE

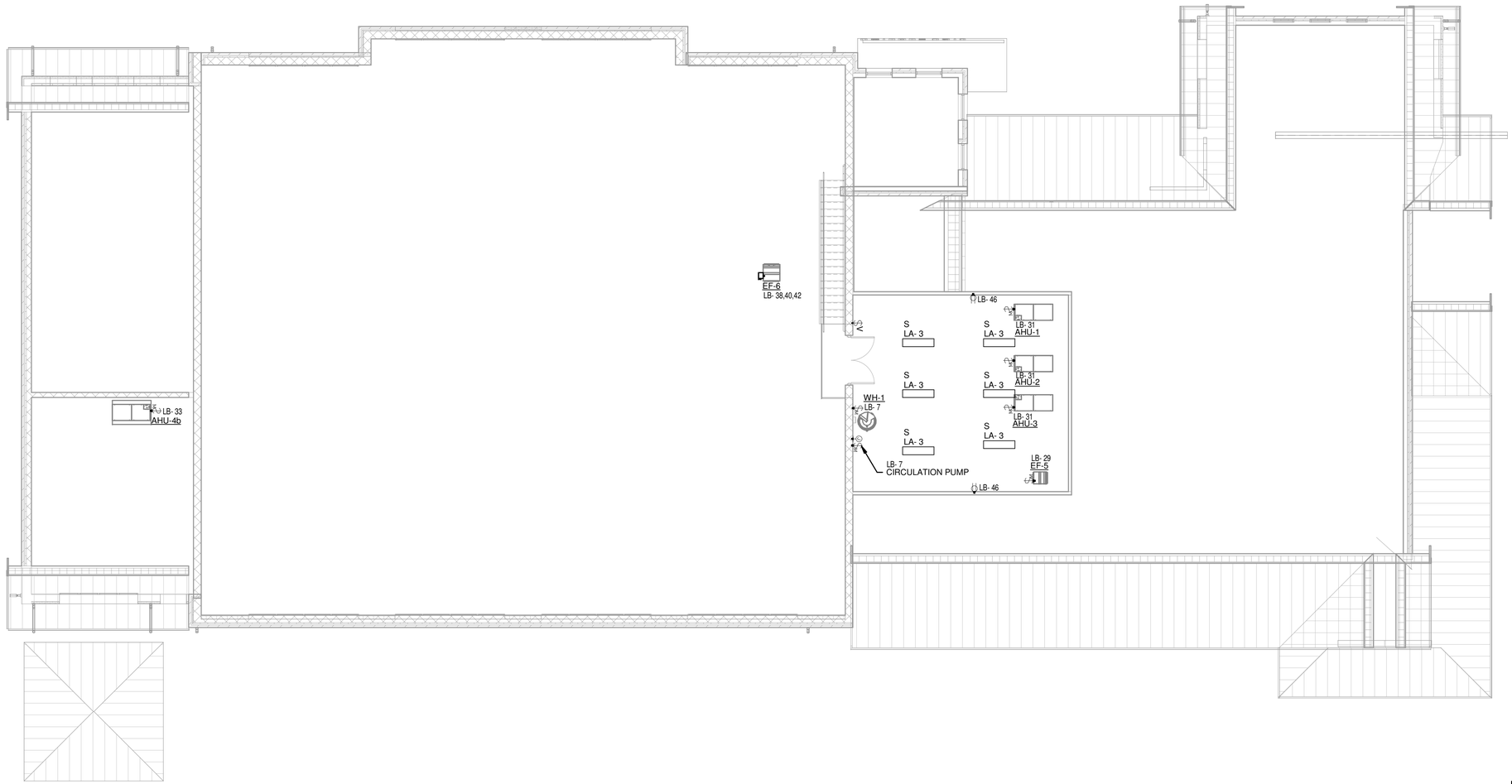
ISSUE FOR CONSTRUCTION

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FLOOR PLAN - ELECTRICAL POWER

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E2.02

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1 E2.03 MEZZANINE PLAN - ELECTRICAL
1/8" = 1'-0"

N

8' 0' 8' 16'
1/8" = 1'-0"

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11/11/2019
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KOMATSU ARCHITECTURE

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MEZANINE PLAN - ELECTRICAL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E2.03

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E2.04 NOTES BY SYMBOL

NUMBER	NOTE
1	J-BOX FOR BACK-LIT SIGNAGE. REFER TO A2.01 FOR EXACT LOCATION AND COORDINATE EXACT REQUIREMENTS WITH ARCHITECT. VERIFY EXACT ELECTRICAL REQUIREMENTS PRIOR TO INSTALLATION. ROUTE 2#10, #12G IN 1/2" CONDUIT.



1 E2.04 ROOF PLAN - ELECTRICAL
1/8" = 1'-0"

N

8' 0' 8' 16'
1/8" = 1'-0"

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ROOF PLAN - ELECTRICAL

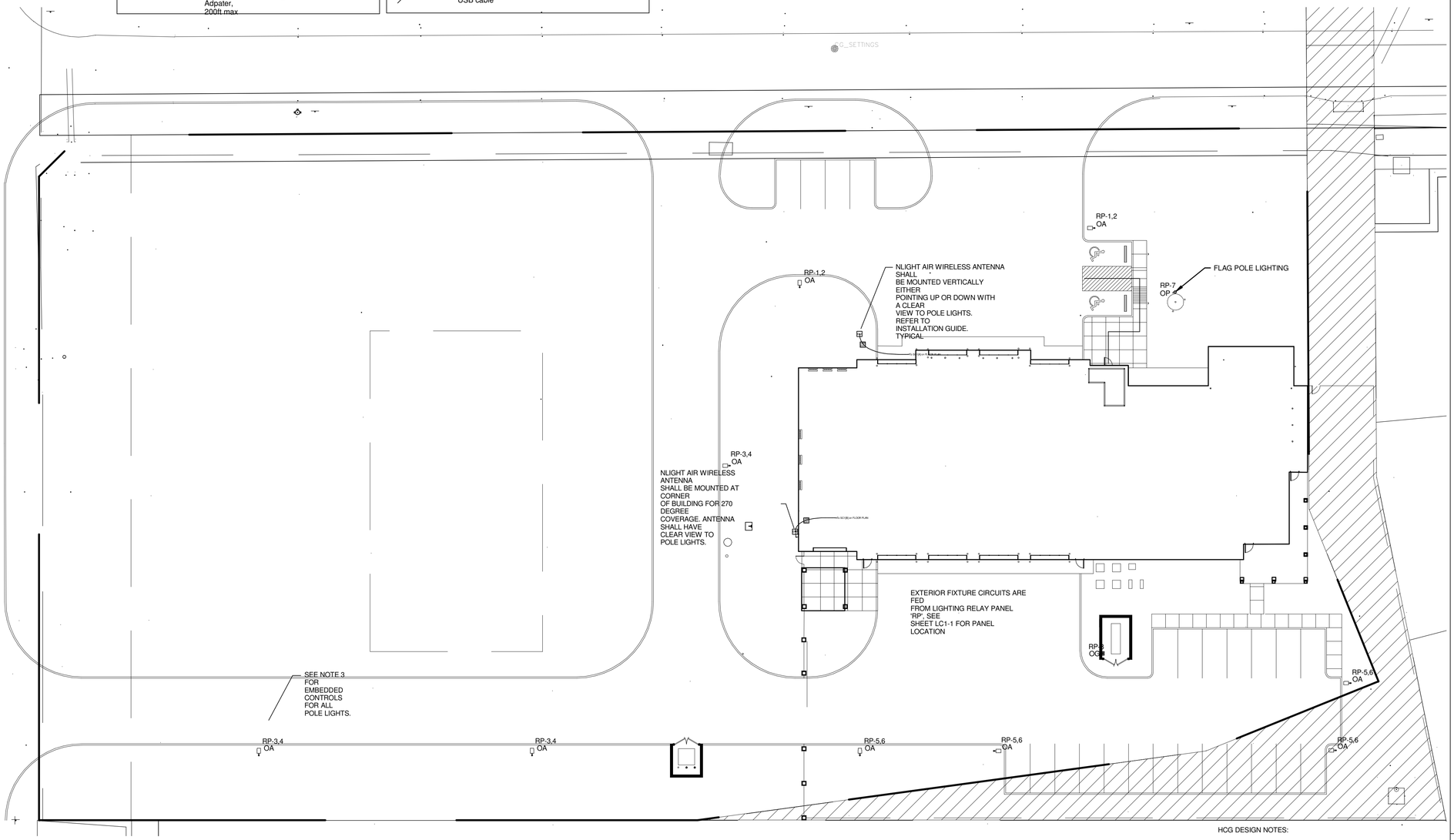
SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E2.04

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SITE PLAN
Project: MANSFILED
FIRE STATION NO. 5

2	EA2	NECYD NLTAIR XX nLight Eclypse, nLight AIR adaptor for nECY USB
2	USB EXT	EXT HCG USB EXTENDER USB Extention Cable for nLight Air Adpater, 200ft max

WIRE LEGEND - SITE PLAN	
	USB USB USB cable



1 SITE LIGHTING CONTROLS DETAIL
NOT TO SCALE

HCG DESIGN NOTES:

1. DRAWING BASED ON 2018 IECC.

2. DRAWING BASED ON 120V LIGHTING SYSTEM. REFER TO ELECTRICAL DRAWINGS FOR VOLTAGE SERVING POLE LIGHTS.

3. POLE LIGHT FIXTURES TYPE 'OA' SHALL HAVE EMBEDDED nLIGHT AIR OPTION 'NLTAIR2' FOR INTEGRAL OCCUPANCY AND DAYLIGHT SENSORS WITH WIRELESS COMMUNICATION TO ALLOW GROUP CONTROL. LIGHTS TO BE CONFIGURED VIA AN APP AND SHALL DIM BY AT LEAST 30% WHEN NO ACTIVITY HAS BEEN DETECTED FOR NO MORE THAN 15 MINUTES. WHEN STATION GOES ON ALERT SYSTEM SHALL SET POLE LIGHTS TO 100% VIA CONTACT CLOSURE DEVICE CONNECTED TO SYSTEM AND RETURN TO DEFAULT SETTINGS WHEN ALERT EXPIRES.

E3.01 GENERAL NOTES

1	ACUITY CONTROLS IS THE BASIS OF DESIGN. REFER TO LIGHTING CONTROL SPECIFICATION FOR OTHER APPROVED LIGHTING CONTROL MANUFACTURERS.

AcuityBrands.

MANSFILED FIRE STATION NO. 5
Mansfield, Texas

Drawing Type:	Control Layout
Prepared For:	HCG/ACUITY CONTROLS GROUP
Date:	10/10/2019
Scale:	AS NOTED
Drawn By:	JDA
Project #:	19-26764
DWG Ref:	EXXX (MM/DD/YYYY)
Sheet:	LC1.2

No.	Description	Date
	REVISIONS	

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Mansfield, Texas 76063

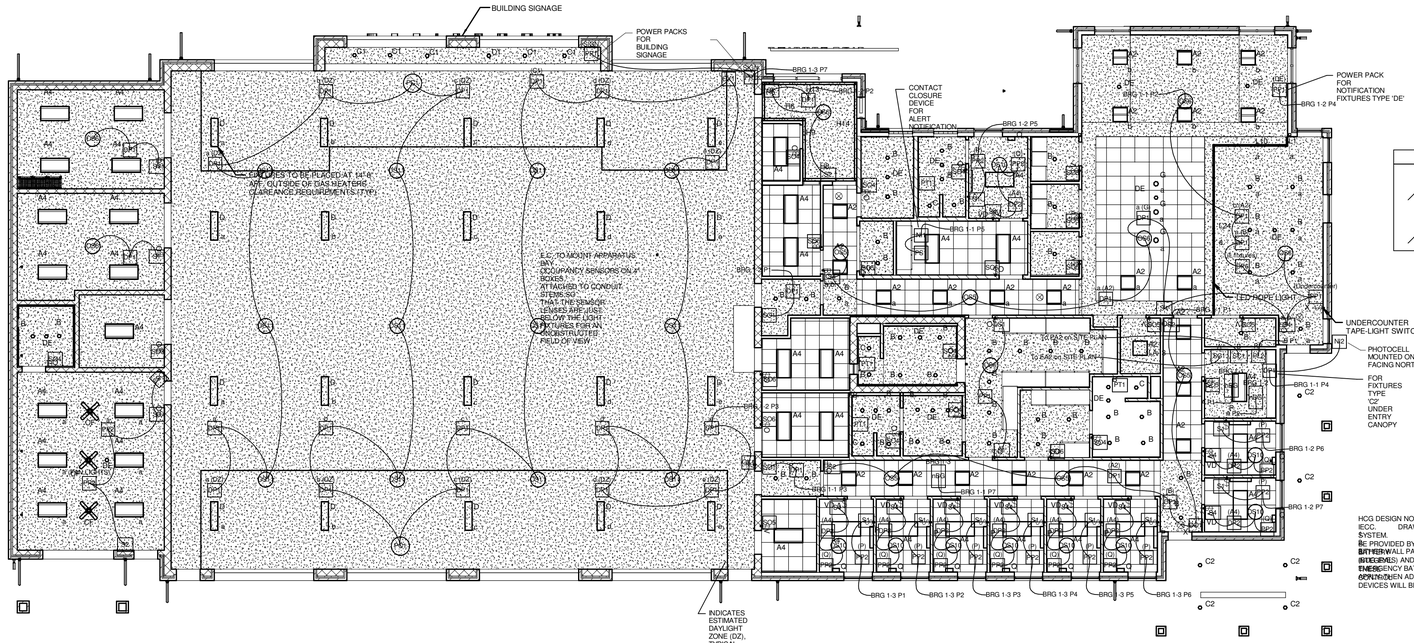
SITE LIGHTING CONTROL DETAIL

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E3.01

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Created by JDA
FLOOR PLAN
Project: MANSFILED
FIRE STATION NO. 5

1	DO1 NWSX LV DX XX Wall Switch Sensor, Low Voltage, Raise/Lower Dimming Without Wires	1	NI2 NIO PC KIT nLight Device, On/off photocell, Kit	1	PL2 ARP INTENC16 NLT 12FCR MVOLT SC SM Acuity Relay Panel, Include INT and ENC, 16-Size, nLight, 12-field configurable relays, 120-277 VAC, Screw Cover, Surface Mount	12	S4 NPODM 2P DX XX Low Voltage Push-Button Wallpod, 2-Pole, Raise/Lower Dimming Without Wires
28	DP1 NPP16 D EFP Power/Relay Pack, Occupancy Controlled Dimming, External Fault Protection	9	OS10 NCM PDT 9 Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Small Motion / Standard Range 360□ Lens	5	PP1 NPP16 EFP Power/Relay Pack, External Fault Protection	2	SO1 NPODM XX Low Voltage Push-Button Wallpod
9	DP2 NPP16 D EFP SA Power/Relay Pack, Occupancy Controlled Dimming, External Fault Protection, Vacancy (default) or Auto-On	12	OS11 NCM 6 LT Low Voltage Ceiling Mount Sensor, High Bay 360□ Lens, Low Temperature / High Humidity	20	PP2 NPP16 EFP SA Power/Relay Pack, External Fault Protection, Vacancy (default) or Auto-On	2	SO2 NWSX LV XX Wall Switch Sensor, Low Voltage
1	DP6 NSPS POD ELV 120 Secondary Relay Pack, Phase Control Dimming, Electronic Low Voltage, 120 VAC	1	OS3 NWV 16 KIT Low Voltage Corner Mount Sensor, 16 , Kit	1	PS1 NPS 80 Power Supply, 80 mA	1	SO3 WSX XX Wall Switch Sensor
2	GX1 NPOD GFX XX Low Voltage Wallpod, Graphic Touchscreen	5	OS5 NCM 10 Low Voltage Ceiling Mount Sensor, Large Motion / Extended Range 360□ Lens	4	PT1 PTS 60 XX Preset Timer Switch, 60 Minute Max	8	SO4 WSX PDT XX Wall Switch Sensor, Passive Dual Technology
3	nBG NBRG 8 KIT Bridge, Kit	7	OS8 NCM PDT 10 Low Voltage Ceiling Mount Sensor, Passive Dual Technology, Large Motion / Extended Range 360□ Lens	13	S1 NPODM XX Low Voltage Push-Button Wallpod	9	SO5 WSX SA XX Wall Switch Sensor, Vacancy (default) or Auto-On
1	NI1 NIO 1S KO nLight Device, Contact Closure Input, Chase Nipple Mounting	2	PC1 NCM ADCX Low Voltage Ceiling Mount Sensor, Photocontrol w/ Auto Dimming; No Wires	5	S2 NPODM DX XX Low Voltage Push-Button Wallpod, Raise/Lower Dimming Without Wires	4	SO6 WSX PDT SA XX Wall Switch Sensor, Passive Dual Technology, Vacancy (default) or Auto-On
				1	S3 NPODM 2P XX Low Voltage Push-Button Wallpod, 2-Pole		



WIRE LEGEND - FLOOR PLAN

	CAT5e Pre-terminated CAT5e cable
	USB USB cable

HCG DESIGN NOTES: DRAWING BASED ON 2018 IECC. DRAWING BASED ON 120V LIGHTING SYSTEM. EMERGENCY LIGHTING IS ASSUMED TO BE PROVIDED BY BATTERY WALL PACK WITH EMERGENCY INVERTERS AND OR LIGHT FIXTURES WITH EMERGENCY BATTERY PACKS. IF NEITHER OF THESE OPTIONS ARE PRESENT ADDITIONAL EMERGENCY LIGHTING DEVICES WILL BE REQUIRED.

1 INTERIOR LIGHTING CONTROLS DETAIL
NOT TO SCALE

E3.02 GENERAL NOTES

1	ACUITY CONTROLS IS THE BASIS OF DESIGN. REFER TO LIGHTING CONTROL SPECIFICATION FOR OTHER APPROVED LIGHTING CONTROL MANUFACTURERS.

AcuityBrands

MANSFILED FIRE STATION NO. 5
Mansfield, Texas

Drawing Type: Control Layout	Prepared For: HOUSTON CONTROLS GROUP
Date:	10/10/2019
Scale:	AS NOTED
Drawn By:	JDA
Project #:	19-26764
DWG Ref:	EXXX (MM/DD/YYYY)
Sheet:	LC1.1

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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5
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Mansfield, Texas 76063

INTERIOR LIGHTING CONTROL DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E3.02

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nLight System Notes

EVERY NLIGHT ENABLED DEVICE (INCLUDING NLIGHT EANABLED FIXTURES) IS FURNISHED WITH (1) PERMANENTLY ADHERED ID TAG AND (1) MATCHING, PARTIALLY ADHERED ID TAG TO BE PLACED ON THE RISER DIAGRAM SHEET, OR THE LIGHTING CONTROL LAYOUT SHEET, PROVIDED AS PART OF AN NLIGHT SUBMITTAL. THIS SHALL BE DONE DURING INSTALLATION AND PRIOR TO FACTORY STARTUP. FAILURE TO COMPLY MAY RESULT IN STARTUP DELAYS AND ADDITIONAL COSTS AT THE CONTRACTOR'S EXPENSE. DO NOT PLACE DEVICE ID STICKERS ON FLOOR PLAN UNLESS REQUIRED TO EXECUTE NFLOORPLAN SERVICES, REFERENCE NFLOORPLAN SERVICE NOTES ON THIS SHEET FOR SPECIFIC REQUIREMENTS.

ONE RELAY PACK OR NLIGHT ENABLED FIXTURE IS NEEDED PER CIRCUIT/ZONE TO BE CONTROLLED AND CAN RESIDE WITHIN SENSORS, WALLPODS, OR RELAY PACKS. POWER PACK PLACEMENT ON DRAWINGS IS FOR COUNTING ONLY; FINAL PLACEMENT IS UP TO DISCRETION OF CONTRACTOR/ENGINEER. PLEASE RECHECK COUNTS TO VERIFY THE NUMBER OF RELAYS NEEDED TO SWITCH ALL DESIRED LOADS.

BRIDGES, RELAYS, POWER PACKS, WALLPODS, AND SENSORS ON DRAWINGS WERE PLACED WITH INFORMATION PROVIDED AT TIME OF DESIGN. ADDITIONAL BRIDGES AND/OR SENSORS MAY BE REQUIRED DEPENDING ON BUILDING CHANGES, FINAL PARTITION HEIGHT/PLACEMENT, FURNITURE PLACEMENT, EQUIPMENT HEIGHT/PLACEMENT AND SHELVING HEIGHT/PLACEMENT.

THE LAYOUT OF THE NETWORK BACKBONE (BRIDGES AND GATEWAYS) HAS BEEN PLACED IN A SEPARATE TREE DIAGRAM AND NOT ON THE ACTUAL LAYOUT. FINAL PLACEMENT OF THE BRIDGE(S) AND GATEWAY(S) DEVICES SHALL BE AT THE CONTRACTOR/ENGINEER DISCRETION.

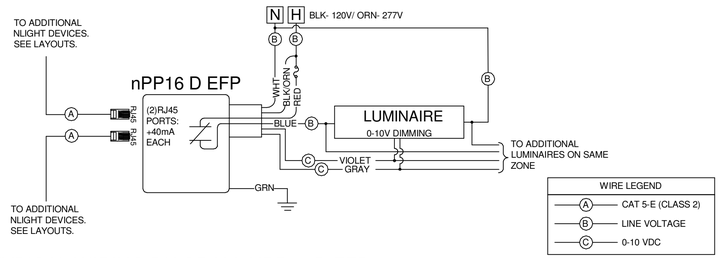
ALL DEVICES HAVE RJ-45 FEMALE PORTS. MAKING NETWORK CONTROL CABLES IS REQUIRED, T568B TERMINATIONS ARE RECOMMENDED. IT IS IMPERATIVE THAT ALL NETWORK CONTROL CABLES BE TESTED WITH A LAN CABLE TESTER TO VERIFY PROPER TERMINATIONS.

DAISY-CHAINED DEVICES SHOULD BE POWERED UP AND WORKING ON DEFAULT PROGRAMMING PRIOR TO CONNECTION TO BRIDGE OR GATEWAYS.

LOW VOLTAGE NETWORK CONTROL CABLE (CAT5/5E/6) RUNS FOR LOCAL ZONES, HOMERUNS AND BACKBONE SHOULD BE WHITE WITH CABLES LABELED.

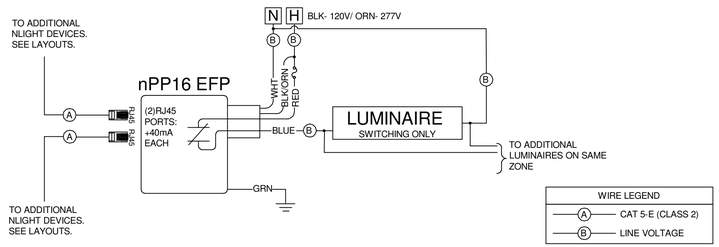
CONTRACTOR TO VERIFY BLINK/DIAGNOSTIC CODES (VISIT HTTP://NLIGHTCONTROLS.COM/WP-CONTENT/UPLOADS/NLIGHT_POCKET_GUIDE.PDF) WHEN CONNECTING GATEWAYS/BRIDGES TO ZONES.

MAXIMUM CABLE LENGTH FROM START DEVICE TO END DEVICE IS 1500' INCLUDING HOMERUN TO BRIDGE DEVICE, IF PRESENT. MANUFACTURER IS NOT RESPONSIBLE FOR SYSTEMS EXCEEDING CABLING PARAMETERS.



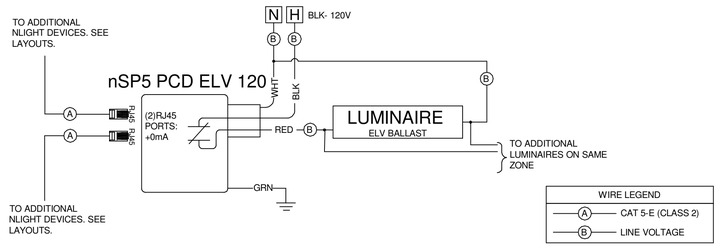
1 TYPICAL WIRING DIAGRAM: NPP16 D EFP

N.T.S.



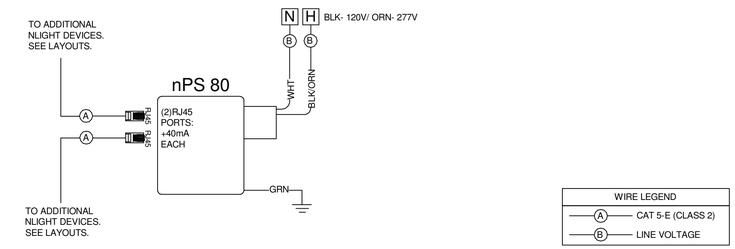
2 TYPICAL WIRING DIAGRAM: NPP16 EFP

N.T.S.



3 TYPICAL WIRING DIAGRAM: NSP5 PCD ELV 120

N.T.S.



4 TYPICAL WIRING DIAGRAM: NPS 80

N.T.S.

E3.03 GERAL NOTES

1	ACUITY CONTROLS IS THE BASIS OF DESIGN. REFER TO LIGHTING CONTROL SPECIFICATION FOR OTHER APPROVED LIGHTING CONTROL MANUFACTURERS.

AcuityBrands

MANSFILED FIRE STATION NO. 5
Mansfield, Texas

Drawing Type: Control Layout

Prepared For: HORTON CONTROLS GROUP

Date: 10/10/2019
Scale: AS NOTED
Drawn By: JDA
Project #: 19-26764
DWG Ref:
EXXX (MM/DD/YYYY)
Sheet: LC1.3

No.	Description	Date
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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

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MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063

LIGHTING CONTROL DETAILS

SHEET SIZE: 22 x 34
JOB NO: 2016.166
DATE: 11/07/2019
SHEET: E3.03

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Sequence of Operation

Apperatus Bay

- Lighting shall be controlled with [networked] occupancy sensor with multi-zone 0-10v dimming capability and time-clock functionality..
- Control stations shall be preset station for scene control, keypad or touch-screen.
- Daylight sensors and dimming shall be used as required for spaces with more than 150w of lighting in daylight zones within space, per IECC 2018.

Day Room/Kitchen/Dining

- Lighting shall be controlled with [networked] occupancy sensor with multi-zone 0-10v dimming capability and time-clock functionality..
- Control stations shall be preset station for scene control, keypad or touch-screen.
- Daylight sensors and dimming shall be used as required for spaces with more than 150w of lighting in daylight zones within space, per IECC 2018.

Gear/Extractor Rooms

- Lighting shall be controlled with [stand-alone] occupancy sensor with dimming functionality.
- Control stations shall be preset station for scene control, keypad or touch-screen.

Corridors

- Lighting shall be controlled with [networked] dimming controls (for tuning) and time-clock functionality.
- Occupancy sensors to be used for after-hours control with controlled with time-clock.
- Override station shall be on/off override only.

Vestibules

- Lighting shall be controlled with [networked] occupancy sensors and dimming controls.
- Override station shall be on/off override only.

Dorm Rooms

- Lighting shall be controlled with [stand-alone] vacancy sensor with dimming functionality.
- Control stations shall be preset station for scene control, keypad or touch-screen.
- Daylight sensors and dimming shall be used as required for spaces with more than 150w of lighting in daylight zones within space, per IECC 2018.

Large Locker Room

- Lighting shall be controlled with [stand-alone] occupancy sensor with On/Off operation only.
- Control stations shall be preset station for scene control, keypad or touch-screen.

Small Locker Room

- Lighting shall be controlled with [stand-alone] vacancy sensor with On/Off operation only.
- Control stations shall be preset station for scene control, keypad or touch-screen.

Shower Room

- Lighting shall be controlled with [stand-alone] occupancy sensor with On/Off operation only.
- Control stations shall be preset station for scene control, keypad or touch-screen.

Workout Room

- Lighting shall be controlled with [stand-alone] occupancy sensor with dimming functionality.
- Control stations shall be preset station for scene control, keypad or touch-screen.

Office

- Lighting shall be controlled with [stand-alone] vacancy sensor with On/Off operation only.

Work Shop/Meds

- Lighting shall be controlled with [stand-alone] vacancy sensor with On/Off operation only.

Storage Room/Janitor/Pantry

- Lighting shall be controlled with [stand-alone] vacancy sensor with On/Off operation only.

Toilets

- Lighting shall be controlled with [stand-alone] occupancy sensor with On/Off operation only.
- Manual override shall be keypad.

Exterior

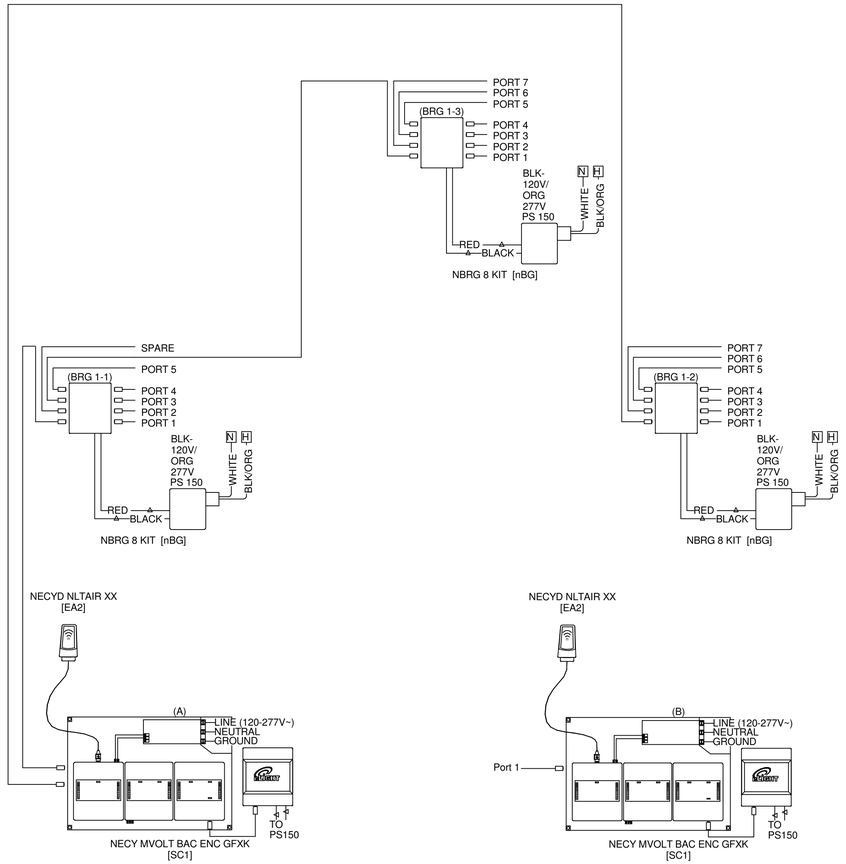
- Lighting shall be controlled with [networked] controls with time-clock functionality for set opening and closing times.
- Lighting shall be controlled with [networked] photocell for dawn to dusk control as a function of available daylight.

Time-clock Scheduling

- Shall include astronomical time-clock integral to processor.
- Schedules shall allow for:
  - o Weekday Open
  - o Weekday Close
  - o Weekend Open
  - o Weekend Close

Occupancy / Vacancy Sensors

- Time-delays shall be set to factory default, no more than 30 minutes as required



1 NECY (A) RISER DIAGRAM
NOT TO SCALE

2 NECY (B) RIDER DIAGRAM
NOT TO SCALE

E3.04 GENERAL NOTES

1	ACUITY CONTROLS IS THE BASIS OF DESIGN. REFER TO LIGHTING CONTROL SPECIFICATION FOR OTHER APPROVED LIGHTING CONTROL MANUFACTURERS.

AcuityBrands

MANSFILED FIRE STATION NO. 5
Mansfield, Texas

Drawing Type: Control Layout
Prepared For: HORTON CONTROLS GROUP

Date:	11/07/2019
Scale:	AS NOTED
Drawn By:	JDA
Project #:	19-26764
DWG Ref:	EXXX (MM/DD/YYYY)
Sheet:	LC1.4

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
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Texas Registration # F-10963

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5
4444 National Parkway
Mansfield, Texas 76063
LIGHTING CONTROLS DETAILS CONTINUED

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E3.04

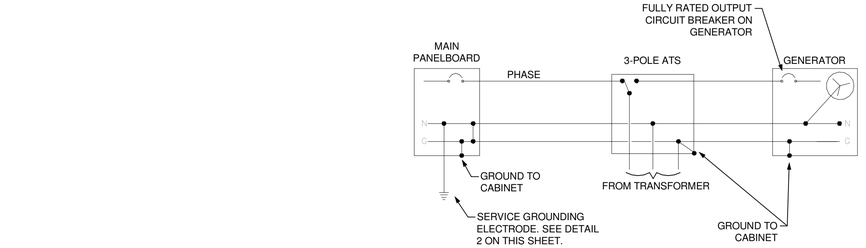
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EQUIPMENT SCHEDULE BY SYMBOL (BUILDING A)

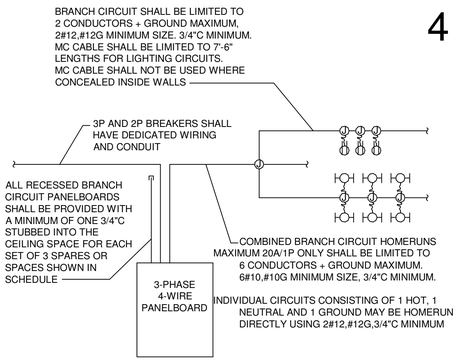
NAME	MCA / MOCP	ELECTRIC HEAT	VOLTAGE/ PH	(DISCONNECT) / (WIRE)	PANEL DESIGNATION
AHU-1	7.9 / 50	N/A	120 / 1	(SWITCH)(2 #8, #10 G, 3/4" C)	
AHU-2	7.9 / 50	N/A	120 / 1	(SWITCH)(2 #8, #10 G, 3/4" C)	
AHU-3	10.8 / 50	N/A	120 / 1	(SWITCH)(2 #8, #10 G, 3/4" C)	
AHU-4	7.9 / 15	N/A	120 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
CU-1	12 / 20	N/A	208 / 1	(30/2/NF)(2 #12, #12 G, 3/4" C)	
CU-2	12 / 20	N/A	208 / 3	(30/3/NF)(3 #12, #12 G, 3/4" C)	
CU-3	18 / 30	N/A	208 / 3	(30/3/NF)(3 #10, #10 G, 3/4" C)	
CU-4	14 / 20	N/A	208 / 1	(30/2/NF)(2 #12, #12 G, 3/4" C)	
CU-5	25.4 / 40	N/A	208 / 1	(60/2/NF)(2 #8, #10 G, 3/4" C)	
CIRC PUMP	1/25 HP	N/A	120 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
WH-1	2 / 15	N/A	120 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
EF-1,2	1/8 HP	N/A	120 / 1	(SWITCH)(2 #10, #12 G, 3/4" C)	
EF-3	1/8 HP	N/A	120 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
EF-4	5 HP	N/A	208 / 3	(30/3/NF)(2 #12, #12 G, 3/4" C)	
EF-5	1/6 HP	N/A	120 / 1	(SWITCH)(2 #10, #12 G, 3/4" C)	
EF-6	2 HP	N/A	208 / 3	(30/3/NF)(3 #12, #12 G, 3/4" C)	
EF-7	1/2 HP	N/A	208 / 1	(30/2/NF)(2 #12, #12 G, 3/4" C)	
LRH-1,2,3,4,5,6	2 / 15	N/A	120 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
FCU-109,125,127,131, 132,133,134,135,136	.2 / 15	N/A	208 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	
FCU/CU-6,7	7 / 15	N/A	208 / 1	(30/2/NF)(2 #12, #12 G, 3/4" C)	
HR-1,2	.1 / 15	N/A	208 / 1	(SWITCH)(2 #12, #12 G, 3/4" C)	

GENERAL NOTES APPLY TO ALL :
1. VERIFY ALL MOUNTING REQUIREMENTS WITH EQUIPMENT PROVIDER.
2. VERIFY ACTUAL EQUIPMENT LOADS AND CONNECTION REQUIREMENTS WITH EQUIPMENT BEING PROVIDED.

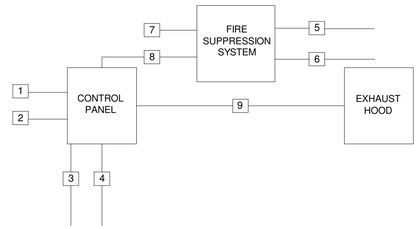
EQUIPMENT NOTES :
1. CONFIRM EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER. PROVIDE NEW NEMA 3R DISC IF DISCONNECTING MEANS IS NOT INTEGRAL TO MANUFACTURER CONTROL PANEL. CONFIRM MOCP OR BRKR SIZE IN CONTROL PANEL AND MATCH EQUIPMENT FEEDER (CONDUIT AND WIRE) FOR 2 CONDUCTOR & GROUND. IF PANEL REQUIRES 3 CONDUCTOR & GROUND, FOLLOW FEEDER SCHEDULE ON SHEET E3.01 FOR CONDUIT AND WIRE.



4 ATS GROUNDING DETAIL
NTS



3 BRANCH CIRCUIT WIRING
NTS

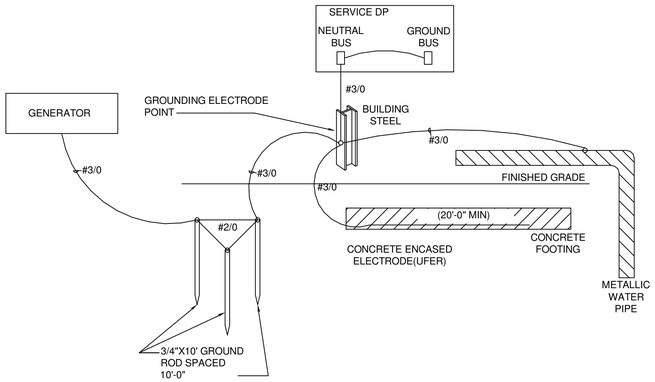


5 KITCHEN HOOD DETAIL
NTS

NOTES BY SYMBOL FOR DETAIL 5

1	INPUT 120V FOR CONTROL SIGNALS
2	INPUT 120V FOR HOOD LIGHTS
3	OUTPUT FOR BUILDING FIRE ALARM NOTIFICATION
4	OUTPUT 120V FOR EXHAUST FAN CONTROL
5	OUTPUT 120V FOR ELECTRICAL SHUNT TRIP CONTROL
6	OUTPUT 120V FOR GAS SHUT OFF CONTROL
7	INPUT 120V FOR CONTROL SIGNALS
8	TIE 2-WIRE FOR ANSEL SYSTEM NOTIFICATION
9	HOOD LIGHTS

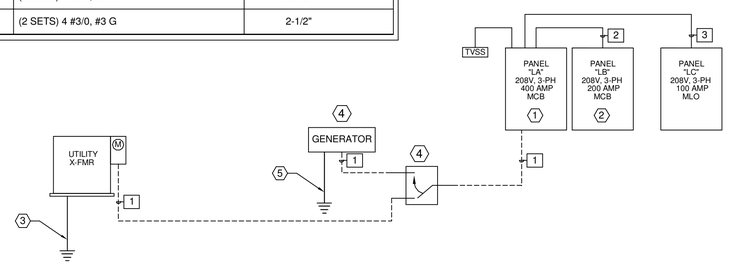
NOTE:
CONTRACTOR SHALL VERIFY WITH HOOD SUPPLIER ALL CONTROL VOLTAGES AND CONTROL WIRE SIZE AND TYPE. CONTRACTOR SHALL PROVIDE COMPATIBLE COIL VOLTAGES TO COORDINATE WITH SIGNALS PROVIDED BY HOOD MANUFACTURER.



2 GROUNDING DETAIL
NTS

PANEL FEEDER AND METER CENTER WIRE SCHEDULE

NO.	SERVICE SIZE	WIRE SIZE	CONDUIT SIZE (EACH SET)
1	400 AMPS	(2 SETS) 4 #3/0, #3 G	2-1/2"
2	400 AMPS	(2 SETS) 4 #3/0, #3 G	2-1/2"



1 ELECTRICAL RISER DIAGRAMS
NTS

NOTES BY SYMBOL "◇"

1. PROVIDE 42 POLE, 400 AMP, 3-PHASE, 4-WIRE PANEL WITH 400 AMP MAIN CIRCUIT BREAKER. PANEL SHALL HAVE 225 AMP FEED-THROUGH LUGS WHICH WILL SERVE PANEL "LB".
2. PROVIDE 72 POLE, 225 AMP, 3-PHASE, 4-WIRE PANEL WITH MAIN LUGS ONLY.
3. RE: 2/E6.01 BUILDING SERVICE, ENTRANCE GROUNDING DETAIL FOR ADDITIONAL INFORMATION.
4. PROVIDE 150KW DIESEL GENERATOR. PROVIDE ALL NECESSARY ELECTRICAL HARDWARE TO COMPLETE CONNECTION BETWEEN GENERATOR AND PANEL. IN ADDITION, PROVIDE SOUND ATTENUATING ENCLOSURE "LEVEL 1" FOR GENERATOR. PROVIDE OPEN TRANSITION, MANUFACTURER'S RECOMMENDED AUTOMATIC TRANSFER SWITCH (MINIMUM OF 400 AMPS) (ATS) WHICH SHALL BE COMPATIBLE WITH PROVIDED GENERATOR. GENERATOR FUEL TANK SHALL BE SIZED SO THAT GENERATOR CAN SUPPLY POWER AT FULL LOAD FOR 24HRS (TANK NO. 29 OR 322 GALLONS). INFORMATION IS BASED ON GENERAC GENERATORS.
5. REFER TO DETAIL 2 ON THIS SHEET.

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Texas Registration # F-10963

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL DETAILS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E6.01

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FAULT CURRENT BRACING IS BASED ON A UTILITY COMPANY TRANSFORMER SIZE OF 750KVA MAXIMUM WITH A MINIMUM IMPEDANCE OF 3.0 AT A MINIMUM DISTANCE OF 40' FROM THE SERVICE TO THE TRANSFORMER. CONTRACTOR SHALL VERIFY THIS DATA WITH THE UTILITY COMPANY PRIOR TO START OF WORK. IF ANY OF THE MINIMUMS OR MAXIMUM WILL BE EXCEEDED CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PURCHASE OF EQUIPMENT AND START OF CONSTRUCTION SO THAT DESIGN REVISIONS CAN BE MADE.

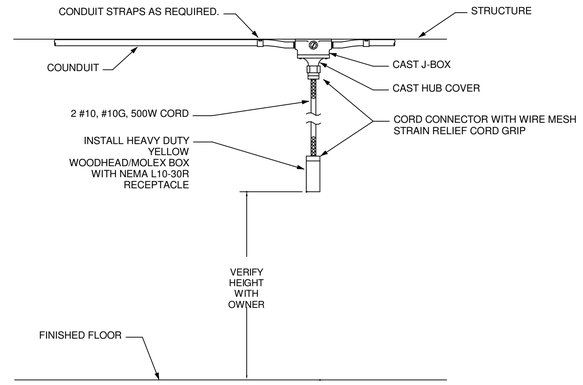
FAULT CURRENT CALCULATION:

TRANSFORMER = 150 KVA, Z = 1.7%

$$I_{SC} = \frac{KVA \times 1000}{V \times Z \times 1.732}$$

$$I_{SC} = \frac{150 \times 1000}{208 \times .017 \times 1.732} = \frac{150000}{6.13} + 10\% \text{ TOLERANCE}$$

MAXIMUM AVAILABLE 3□ FAULT = 26.92 KA



1 SO CABLE CORD DROP DOWN RECEPTACLE DETAIL
NTS

STATE OF TEXAS
11/11/2019
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No.	Description	Date
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KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL DETAILS AND SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E6.02

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Branch Panel: LA

Mounting: SURFACE
Supply From:
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 30,000 AIC
Mains Type: MCB
Mains Rating: 400 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	DECON/DROM RM/ HALL...	20	1	9	1056	689					6	1	20	DINING/PANTRY/DAY RM...	2
3	WORKSHOP/MEDS/LOCKERS...	20	1	7			884	1056			9	1	20	RPORTS/OFFICE 108/HALL...	4
5	APPARATUS BAY Lighting	20	1	11					1314	1496	12	1	20	APPARATUS BAY Lighting	6
7	APPARATUS BAY BUILDING...	20	1	10	1200	1188					10	1	20	SCBA/WORKOUT RM Lighting ...	8
9	SITE LIGHTING	20	2	2			165	330			3	2	20	SITE LIGHTING	10
11									165	330					12
13	WORKOUT FLOOR BOX	20	1	3	360	1260					11	1	20	RESTROOM RECEPTACLES	14
15	WORKOUT RECEPTACLES	20	1	12			1440	360			3	1	20	WORKOUT FLOOR BOX	16
17	DRYING RACK	20	1	13					1550	1200	10	1	20	WORKOUT WATER COOLER	18
19	EXTRACTOR/EXPRESS WASHER	15	3	6	750	900					8	1	20	APPARATUS BAY...	20
21							750	900			8	1	20	GEAR/EXTRACTOR...	22
23									750	1200	10	1	20	EXPRESS DRYER	24
25	FCU-109,125,127,131,132,133,134,135,136/HR-1,2	20	2	3	275	4813					46	2	60	SOUTH OVERHEAD DOORS	26
27							275	4813							28
29	APPARATUS BAY HEATERS	20	1	12					1440	3850	37	2	50	NORTH OVERHEAD DOORS	30
31	NORTH SIDE OVERHEAD...	30	1	21	2500	3850									32
33	NORTH SIDE OVERHEAD...	30	1	21			2500	2907			24	3	60	AIR COMPRESSOR	34
35	NORTH SIDE OVERHEAD...	30	1	21					2500	2907					36
37	LC	100	3	69	9742	2907									38
39							8447	2500			21	1	30	NORTH SIDE OVERHEAD...	40
41									6592	540	5	1	20	NORTH SIDE OVERHEAD...	42

Total Load: 30 kVA 24 kVA 21 kVA
Total Amps: 250 A 204 A 174 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Cooling	25150 VA	100.00%	25150 VA		
Heating	1440 VA	100.00%	1440 VA	**Total Conn. Load:**	74 kVA
Lighting	7416 VA	125.00%	9271 VA	**Total Connt. Amps**	206 A
Lighting - Exterior	990 VA	125.00%	1238 VA	**Total Demand Load:**	74 kVA
Motor	17325 VA	100.00%	17325 VA	**Total Demand Amps:**	205 A
Other	444 VA	100.00%	444 VA		
Power	9378 VA	100.00%	9378 VA		
Receptacle	14537 VA	84.40%	12268 VA		

Schedule Notes:

Branch Panel: LB

Mounting: SURFACE
Supply From:
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 30,000 AIC
Mains Type: MCB
Mains Rating: 225 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A		B		C		Load (A)	P	BKR (A)	Circuit Description	CKT
1	SOUTH SIDE OVERHEAD...	30	1	21	2500	2500					21	1	30	SOUTH SIDE OVERHEAD...	2
3	SOUTH SIDE OVERHEAD...	30	1	21			2500	540			5	1	20	SOUTH SIDE OVERHEAD...	4
5	SOUTH SIDE OVERHEAD...	30	1	21					2500	1080	9	1	20	APPARATUS BAY...	6
7	WATER HEATER +...	20	1	4	420	1200					10	1	20	CORRIDOR WATER COOLER	8
9	DECON RECEPTACLES	20	1	7			805	1080			9	1	20	MEDS RECEPTACLES	10
11	DEDICATED...	20	1	3					360	1538	13	1	20	WORKSHOP RECEPTACLES	12
13	PANTRY 117 FRIDGE	20	1	8	1000	969					8	1	20	OFFICE 108 Receptacle	14
15	PANTRY 118 FRIDGE	20	1	8			1000	900			8	1	20	REPORTS RECEPTACLES	16
17	PANTRY 119 FRIDGE	20	1	8					1000	1440	12	1	20	133,134,135,136...	18
19	CLOTHES WASHER	20	1	13	1500	1660					14	1	20	CORRIDOR 107 RECEPTACLES	20
21	KITCHEN MICROWAVE	20	1	10			1200	1440			12	1	20	125,127,131,132...	22
23	KITCHEN RECEPTACLES	20	1	5					540	3640	35	2	50	CLOTHES DRYER	24
25	GAS RANGE	20	1	2	180	3640									26
27	RANGE HOOD	20	1	5			600	1200			10	1	20	KITCHEN DISHWASHER	28
29	EF-1,2,5	20	1	11					1330	540	5	1	20	KITCHEN RECEPTACLES	30
31	AHU-1,2,3	50	1	27	3220	180					2	1	20	GARBAGE DISPOSER	32
33	AHU-4	20	1	8			960	1200			10	1	20	UTILITY CONTROLLER	34
35	EF-4	40	3	17	2007	900					6	1	20	EXTERIOR RECEPTACLE +...	36
37									2007	720					38
39							2007	900			7	3	20	EF-6	40
41	EF-7	20	2	6					585	900					42
43					585	50					0	1	20	STORM SHELTER DAMPER	44
45	FUTURE PANEL FOR REMOTE BUILDING	60	3	--			4000	960			8	1	20	MEZZANINE RECEPTACLES	46
47									4000	0	--	1	20	SPARE	48
49					4000	0					--	1	20	SPARE	50
51	FACP	20	1	--			500	0			--	1	20	SPARE	52
53	SPARE	20	1	--					0	0	--	1	20	SPARE	54
55	SPARE	20	1	--	0	0					--	1	20	SPARE	56
57	SPARE	20	1	--			0	0			--	1	20	SPARE	58
59	SPACE	--	--	--					0	0	--	--	--	SPACE	60
61	SPACE	--	--	--	0	0					--	--	--	SPACE	62
63	SPACE	--	--	--			0	0			--	--	--	SPACE	64
65	SPACE	--	--	--					0	0	--	--	--	SPACE	66
67	SPACE	--	--	--	0	0					--	--	--	SPACE	68
69	SPACE	--	--	--			0	0			--	--	--	SPACE	70
71	SPACE	--	--	--					0	0	--	--	--	SPACE	72

Total Load: 22 kVA 16 kVA 19 kVA
Total Amps: 184 A 135 A 162 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Cooling	4180 VA	100.00%	4180 VA		
Power	8410 VA	100.00%	8410 VA	**Total Conn. Load:**	56 kVA
Receptacle	33767 VA	64.81%	21883 VA	**Total Connt. Amps**	157 A
Spare	12500 VA	100.00%	12500 VA	**Total Demand Load:**	45 kVA
				Total Demand Amps:	125 A

Schedule Notes:

Branch Panel: LC

Mounting: SURFACE
Supply From: LA
Enclosure: NEMA 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 30,000 AIC
Mains Type: MLO
Mains Rating: 100 A

CKT	Circuit Description	BKR (A)	P	Load (A)	A(VA)		B(VA)		C(VA)		Load (A)	P	BKR (A)	Circuit Description	CKT
1	CU-1	20	2	12	1250	2167					18	3	20	CU-3	2
3							1250	2167							4
5	CU-2	20	3	12					1450	2167					6
7					1450	2650					25	2	20	CU-5	8
9							1450	2650							10
11	CU-4	20	2	14					1475	750	7	2	20	CU-6	12
13					1475	750									14
15	CU-7	20	2	7			750	180			2	1	20	Receptacle	16
17									750	0	--	1	20	SPARE	18

Total Load: 10 kVA 8 kVA 7 kVA
Total Amps: 84 A 73 A 55 A

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Cooling	24600 VA	100.00%	24600 VA		
Receptacle	180 VA	100.00%	180 VA	**Total Conn. Load:**	25 kVA
				Total Connt. Amps	69 A
				Total Demand Load:	25 kVA
				Total Demand Amps:	69 A

Schedule Notes:



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Texas Registration # F-10963

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

ELECTRICAL SCHEDULES

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/07/2019
SHEET:	E6.03

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FIRE SPRINKLER SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

GENERAL NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF PIPES, FIXTURES, EQUIPMENT, SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. PIPING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES. THE DESIGN INTENT (I.E. PITCHES, VELOCITIES, PRESSURE DROPS, VOLTAGE DROPS, ETC) CANNOT BE GREATLY ALTERED WITHOUT THE APPROVAL OF THE ARCHITECT. THE COST OF THESE DEVIATIONS TO AVOID INTERFERENCE'S SHALL BE PART OF THE ORIGINAL CONTRACT BID.
3. EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.
5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT THAT MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITIONS. EQUIPMENT SHALL INCLUDE (BUT NOT LIMITED TO) VALVES, MOTORS, CONTROLLERS, SWITCHGEAR, AND DRAIN POINTS IF REQUIRED FOR BETTER ACCESSIBILITY. FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM THE DRAWINGS MAY BE ALLOWED TO PROVIDE FOR BETTER ACCESSIBILITY. ANY CHANGES SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER/GENERAL CONTRACTOR PRIOR TO MAKING THE CHANGE.
7. THE CONTRACTOR SHALL PROVIDE ACCESS DOORS, WALL OPENINGS, ROOF OPENINGS OR ANY OTHER CONSTRUCTION REQUIREMENT NEEDED TO ACCOMMODATE THE FIRE SPRINKLER EQUIPMENT. LOCATIONS OF THESE OPENINGS SHALL BE SUBMITTED IN SUFFICIENT TIME TO BE INSTALLED IN THE NORMAL COURSE OF WORK.
8. THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF FIRE SPRINKLER EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.
9. SOME PIPES SHOWN ON EACH FLOOR PLAN MAY BE SHOWN WITH AN OFFSET FOR CLARITY.
10. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL.

ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LB	POUNDS
AHU	AIR HANDLING UNIT	LRA	LOCKED ROTOR AMPS
APPROX	APPROXIMATE	MAX	MAXIMUM
BD	BUILDING DRAIN (BELOW FLOOR)	MCA	MINIMUM CIRCUIT AMPACITY
		MIN	MINIMUM
B.F.G.	BELOW FINISHED GRADE	MSB	MOP SINK BASIN
BS	BUILDING SEWER (OUTSIDE OF BLDG)	N/A	NOT APPLICABLE
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CU	COPPER, CONDENSING UNIT		
CW	DOMESTIC COLD WATER	NFWH	NON-FREEZE WALL HYDRANT
D	EQUIPMENT DRAIN	N/O,N/C	NORMALLY OPEN, NORMALLY CLOSED
DCO	TWO-WAY GRADE CLEANOUT	O/C	ON CENTER
DEG	DEGREES	OFD	ROOF OVERFLOW DRAIN
DSN	DOWNSPOUT NOZZLE	PCO	PLUG CLEANOUT
(E)	EXISTING	PH	PHASE
EQUIP	EQUIPMENT	PROVIDE	FURNISH AND INSTALL
EWC	ELECTRIC WATER COOLER	PSI	POUNDS PER SQUARE INCH
°F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEANOUT	RE:	REFERENCE, REFER
FCU	FAN COIL UNIT	RLA	RUNNING LOAD AMPS
FD	FLOOR DRAIN	RM	ROOM
FS	FLOOR SINK	RPBFP	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER
FT.	FOOT, FEET		
FVC	FIRE VALVE CABINET	RPZ	REDUCED PRESSURE ZONE
G	NATURAL GAS	S	SINK
GCO	GRADE CLEANOUT	SD	STORM DRAIN (BELOW FLOOR)
GWH	NATURAL GAS WATER HEATER	ST	STORM WATER (ABOVE CEILING)
H	HEIGHT	SSD	SUBSURFACE DRAIN
HB	HOSE BIBB	THRU	THROUGH
HP	HORSEPOWER	TP	TRAP PRIMER
HW	DOMESTIC HOT WATER	TYP	TYPICAL
HWC	DOMESTIC HOT WATER CIRCULATION LOOP	U	URINAL
		UL	UNDERWRITERS LABORATORIES, INC.
HWTM	HOT WATER TEMPERATURE MAINTENANCE CABLE	V	SANITARY VENT
		VTR	SANITARY VENT THRU ROOF
HZ	HERTZ	W	SANITARY WASTE (ABOVE FLOOR)
IE	INVERT ELEVATION	WC	WATER CLOSET
IN.	INCH, INCHES	WCO	WALL CLEANOUT
J-BOX	JUNCTION BOX	W/	WITH
kW	KILOWATT	W/O	WITHOUT

LINE TYPES

SYMBOL	DESCRIPTION
—F—	FIRE PROTECTION MAIN WATER SUPPLY
—WP—	AUTOMATIC FIRE SPRINKLER (WET)
—FDC—	FIRE DEPARTMENT CONNECTION MAIN
—D—	INDIRECT DRAIN
——▶——	DIRECTION OF FLOW

VALVES AND FITTINGS

SYMBOL	DESCRIPTION
	SHUT-OFF / ISOLATION VALVE
	OS&Y GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	SUPERVISED VALVE (TYPE AS NOTED)
	PRESSURE REDUCING VALVE
	CHECK VALVE
	STRAINER
FS	FLOW SWITCH
	UNION (DIELECTRIC)
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (WALL)
FDC	FIRE DEPARTMENT SIAMESE CONNECTION (FREE STANDING)
	PRESSURE GAUGE
	ALARM CHECK VALVE
	VALVE IN RISER
	END RISE (90° ELL)
	END DROP (90° ELL)
	RISE OR DROP
	TEE OUT OF TOP OF PIPE
	TEE OUT OF BOTTOM OF PIPE

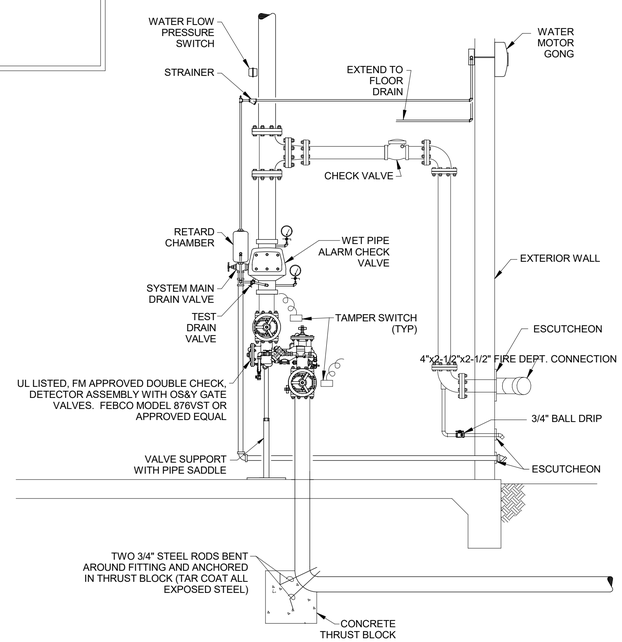
BASIS OF FIRE DESIGN

PRIMARY CODES:

FIRE PROTECTION: 2015 INTERNATIONAL FIRE CODE (WITH CITY AMENDMENTS)

FIRE SPRINKLER SYSTEM(s)

TYPES OF SYSTEMS IN PROJECT: WET PIPE SPRINKLER SYSTEM



NOTE: ALL UNDERGROUND BOLTS & NUTS SHALL BE STAINLESS STEEL
OWNER OR OWNERS REPRESENTATIVE TO INSPECT TRENCH AFTER THE INSPECTOR AND BEFORE THE TRENCH IS FILLED

1 FIRE SPRINKLER SYSTEM DETAIL
NO SCALE

FIRE PROTECTION GENERAL NOTES

1. PROVIDE A COMPLETE AND OPERABLE WET PIPE FIRE SUPRESSION SYSTEM FOR SPACES INSIDE THE BUILDING CONFORMING TO NFPA 13, LOCAL CODES AND ORDINANCES AND THE AUTHORITY HAVING JURISDICTION.
2. THE FIRE SUPRESSION SYSTEM SHALL CONFORM TO ALL APPLICABLE NFPA CODES IN ADDITION TO THE FOLLOWING:
   A. VELOCITIES IN MAINS SHALL NOT EXCEED 15 FEET PER SECOND.
   B. VELOCITIES IN BRANCHES AND BRANCH MAINS SHALL NOT EXCEED 20 FEET PER SECOND.
   C. HYDRAULIC CALCULATIONS SHALL SHOW THE ELEVATIONS OF INDIVIDUAL HEADS AND REFERENCE POINTS (NODES).
   D. HYDRAULIC CALCULATIONS SHALL DESCRIBE EACH INDIVIDUAL HEAD IN THE ZONE BEING CALCULATED. HYDRAULIC CALCULATIONS USING "K" FACTORS TO DESCRIBE WHOLE BRANCH LINES ARE NOT ACCEPTABLE.
   E. SUBMITTALS SHALL BE COMPLETE AND INCLUDE: HYDRAULIC CALCULATIONS, SHOP DRAWINGS AND MATERIAL SUBMITTAL.
3. SUBMITTALS NOT CONFORMING TO THE ABOVE WILL BE REJECTED WITH NO COMMENT.
4. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF SCHEDULE 40 BRANCH PIPING AND SCHEDULE 10 MAINS WITH DOMESTIC PRODUCED VICTAULIC 73-009N FIRELOCK EZ TYPE FITTINGS EXCEPT WHERE THE PIPING IS CONCEALED. WHERE THE PIPING IS CONCEALED OR INACCESSIBLE, ALL PIPING SHALL BE THREADED. GROOVED PIPE FITTINGS ARE PROHIBITED IN CONCEALED OR INACCESSIBLE AREAS. ACCESSIBLE AND CONCEALED ACCESSIBLE REQUIRES VISUAL AS WELL AS PHYSICAL ACCESS TO FITTINGS.
5. POWDER DRIVEN STUDS (SHOT STUDS) ARE NOT ALLOWED AS HANGER ANCHORS.
6. IN AREAS WITH CEILINGS, PROVIDE SEMI-RECESSED SPRINKLER HEADS WITH WHITE TRIM. IN ROOMS WITH NO CEILINGS THAT ARE EXPOSED TO THE PUBLIC, PROVIDE CHROME UPRIGHT SPRINKLER HEADS AND PAINT THE EXPOSED PIPE WHITE TO MATCH EXPOSED STRUCTURE, UNLESS DIRECTED OTHERWISE BY ARCHITECT. IN ROOMS WITH NO CEILINGS THAT ARE NOT EXPOSED TO THE PUBLIC , PROVIDE BRASS UPRIGHT SPRINKLER HEADS W/ HEAD GUARDS AS REQUIRED BY CODE.
7. THE FIRE DEPARTMENT CONNECTION AND TRIM SHALL HAVE A NICKEL FINISH UNLESS ANOTHER COLOR IS REQUIRED BY CODE.
8. ALL BURIED FITTINGS SHALL BE INSTALLED OUTSIDE THE BUILDING FOOTPRINT.
9. THIS FIRE MAIN WILL CONNECT TO A PRIVATE FIRE MAIN. NO RPZ IS NEEDED AT THE BUILDING
10. PROPERLY COAT ALL UNDERGROUND METALLIC FITTINGS WITH CORROSION-RESISTANT COMPOUNDS, MINIMUM STANDARD PER NFPA-13 AND MANUFACTURER'S INSTRUCTIONS. ENCIRCLE ALL METAL JOINTS IN POLYETHYLENE ENCASEMENT WRAP APPROPRIATE FOR THE APPLICATION.
11. ISOLATION VALVE PROPERLY INSTALLED, COATED AND WRAPPED.
12. PROVIDE CODE COMPLIANT THRUST BLOCKING. CONCRETE DUMPING IS PROHIBITED
13. PROVIDE A MAGNETIC TAPE ON TOP OF BURIED PIPING.
14. REFER TO CIVIL FOR PROPER BACKFILLING AND COMPACTION.
15. SPRINKLER HEADS SHALL BE INSTALLED IN THE CENTER OF THE CEILING TILE.
16. ALL UNDERGROUND FIRE PIPING SHALL BE INSPECTED END-TO-END BY FWISD MASTER PLUMBER AT THE FOLLOWING TIMES:
   A. IMMEDIATELY AFTER TAPPING INTO EXISTING 12" MAIN.
   B. IMMEDIATELY BEFORE INSTALLING POLYETHYLENE ENCASEMENT AROUND METALLIC FITTINGS.
   C. AFTER FIRE MARSHAL'S INSPECTION OF UNDERGROUND AND BEFORE BURYING PIPING OR JOINTS.

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

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Texas Registration # F-10963

MANSFIELD FIRE STATION NO. 5

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FIRE SPRINKLER SYMBOLS AND ABBREVIATIONS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	11/11/2019
SHEET:	FP0.01

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FIRE PROTECTION PLAN NOTES

1. ELEVATOR SHAFTS AND ELEVATOR MACHINE ROOMS SHALL NOT BE SPRINKLED AS DIRECTED BY THE CITY OF FORT WORTH WITH FIRE DEPARTMENT AND SHALL NOT COMPROMISE THE RATING OF THE BUILDING AS BEING CONSIDERED FULLY SPRINKLED.
2. HATCH PATTERNS INDICATED ON THE FLOOR PLAN COINCIDE TO THE OCCUPANCY TYPES INDICATED ADJACENT TO SPRINKLER TYPES. CONTACTOR SHALL VERIFY EXTENTS OF EACH OCCUPANCY TYPE PRIOR TO DEVELOPING SPRINKLER SHOP DRAWINGS AND CALCULATIONS.

ORDINARY HAZARD GROUP 1 OCCUPANCY
WET PIPE UPRIGHT SPRINKLER
QUICK RESPONSE, STANDARD COVERAGE
DESIGN DENSITY/AREA METHOD, SPRINKLER DENSITY 0.15 GPM/SQ. FT. FOR 1500 SQ.FT. SPRINKLER OPERATION AREA (LESS CEILING HEIGHT CORRECTION FACTORS FOR QUICK RESPONSE). PROTECTION AREA PER HEAD SHALL NOT EXCEED 130 SQ.FT. 5.6K, 1/2" NPT, 155°F TEMPERATURE HEAD, BRASS FINISH HEAD (TYCO MODEL TY3131 OR EQUAL).



LIGHT HAZARD OCCUPANCY
WET PIPE UPRIGHT SPRINKLER
DESIGN TO 0.10 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 225 SQ. FT. PER HEAD. QUICK RESPONSE, STANDARD COVERAGE UPRIGHT, 5.6K, 1/2" NPT, 155°F, BRASS FINISH (TYCO MODEL TY3131 OR EQUAL) WITH PROTECTIVE METAL WIRE CAGE.

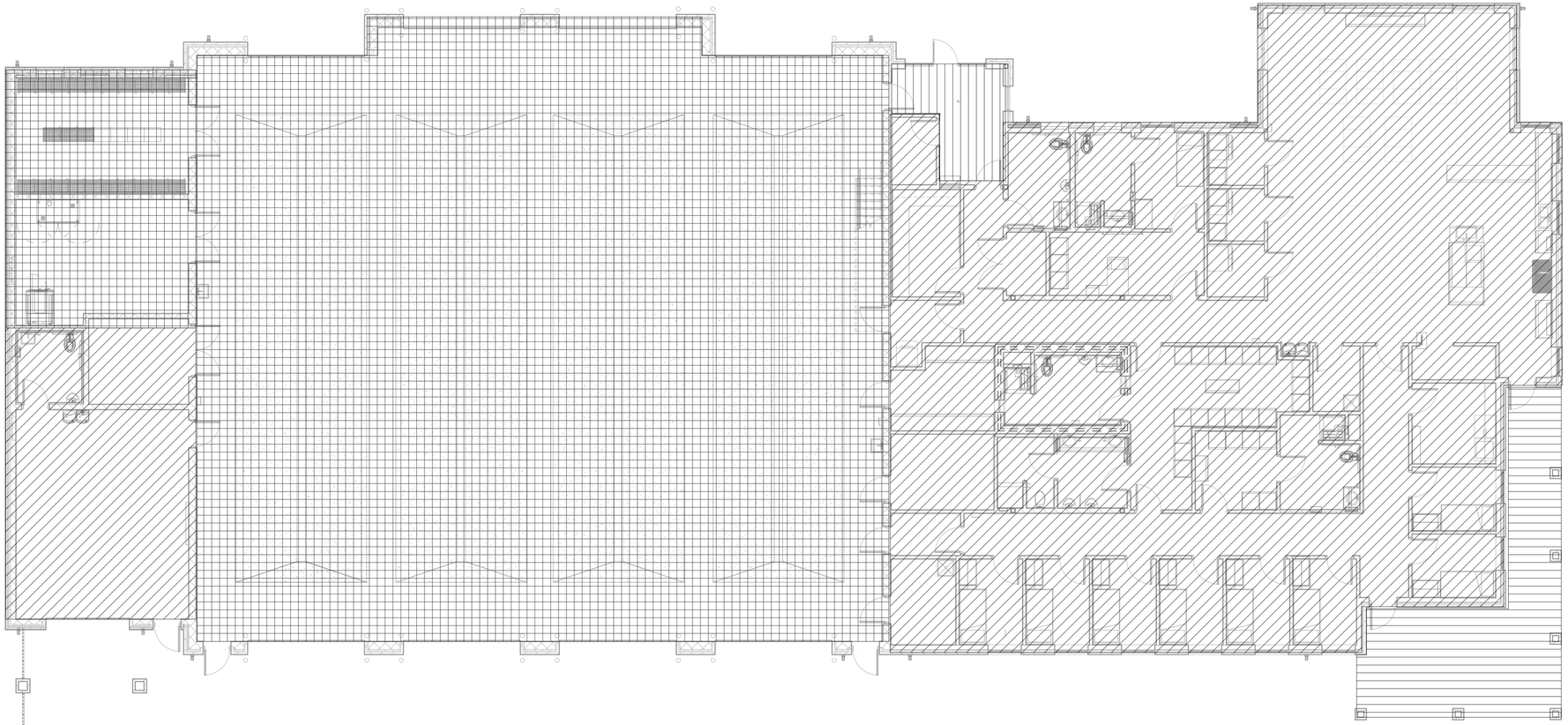


LIGHT HAZARD OCCUPANCY
WET PIPE RECESSED SPRINKLER
DESIGN TO 0.10 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 225 SQ. FT. PER HEAD. RECESSED PENDENT, QUICK RESPONSE, STANDARD COVERAGE, 5.6K, 1/2" NPT, 155°F HEAD, WHITE ESCUTCHEON AND WHITE HEAD (TYCO MODEL TY3231 OR EQUAL).



ORDINARY HAZARD GROUP 1 OCCUPANCY
DRY SIDEWALL SPRINKLER
QUICK RESPONSE, STANDARD COVERAGE
DESIGN TO 0.15 GPM/SQ. FT. OVER A REMOTE OPERATING AREA OF 1500 SQUARE FEET. THE FIRE SPRINKLER HEAD COVERAGE SHALL NOT EXCEED 130 SQ. FT. PER HEAD. QUICK RESPONSE, STANDARD COVERAGE, DRY SIDEWALL, 5.6K, 1/2" NPT, 155°F, STAINLESS STEEL (TYCO MODEL TY3337 OR EQUAL).





1 FP2.01 FIRE PROTECTION PLAN
1/8" = 1'-0"

No.	Description	Date
	REVISIONS	

KOMATSU ARCHITECTURE

ISSUE FOR CONSTRUCTION

MANSFIELD FIRE STATION NO. 5

4444 National Parkway
Mansfield, Texas 76063

FIRE PROTECTION PLAN

STATE OF TEXAS
11/11/2019
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SHEET SIZE:	22 x 34
JOB NO:	2016.166
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TECHNOLOGY GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

NOTE: ALL SYMBOLS AND ABBR'EVIATIONS SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS

GENERAL NOTES

1. PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALL PERMITS, INSPECTIONS, LICENSES AND FEES. FURNISH ALL LABOR, EQUIPMENT, SUPPLIES AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL SYSTEMS.
2. THE DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL DESIGN AND ARRANGEMENT OF CABLING , SYSTEMS, ETC. INFORMATION SHOWN IS DIAGRAMMATIC IN CHARACTER AND DOES NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS. TAKE ALL DIMENSIONS, MEASUREMENTS, EQUIPMENT LOCATIONS, LEVELS, ETC FROM THE ARCHITECTURAL DRAWINGS AND FROM THE EQUIPMENT TO BE FURNISHED. CABLING MAY BE RELOCATED OR OFFSET FOR PROPER CLEARANCES OR TO AVOID CONFLICTS WITH OTHER TRADES.
3. EACH SUBCONTRACTOR SHALL CONFER AND COOPERATE WITH ALL OTHER TRADES TO COORDINATE THEIR WORK. COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO MATERIALS AND EQUIPMENT ROUTED IN CEILING AND WALL CAVITIES, EQUIPMENT ARRANGEMENT IN MECHANICAL SPACES, INCLUDING EQUIPMENT CLEARANCE REQUIREMENTS, ELEVATIONS AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS.
4. BASE FINAL INSTALLATION OF MATERIALS AND EQUIPMENT ON ACTUAL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE. FIELD MEASURE FOR MATERIALS AND EQUIPMENT REQUIRING EXACT FIT. NO EXTRAS WILL BE GIVEN FOR THE CONTRACTORS FAILURE TO FIELD COORDINATE.
5. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR FOR MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM THE WORK.
6. THE CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS OF TECHNOLOGY EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE PURCHASE AND INSTALLATION OF ANY ELECTRICAL GEAR OR CONDUIT.
7. SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED AND NON RATED BUILDING ELEMENTS WITH AN APPROVED FIRE PROOFING MATERIAL. ALL PENETRATIONS OF ARCHITECTURAL BARRIERS SHALL BE COMPLETELY SEALED AT THE CONCLUSION OF INSTALLATION.
8. PROVIDE PROPER BONDING AND GROUNDING OF HORIZONTAL PATHWAYS IN ACCORDANCE WITH THE APPLICABLE ELECTRICAL CODES AND STANDARDS, AND FORT WORTH ISD CABLING STANDARDS.
9. IN THE EVENT OF CONFLICTS IN SYMBOLS, THOSE SHOWN HEREON SHALL APPLY TO THE "T" SERIES DRAWINGS ONLY.
10. ALL TECHNOLOGY WIRING SHALL BE SUPPORTED BY J-HOOKS OR CABLE TRAY PER FORT WORTH ISD CABLING STANDARDS. PROVIDE J-HOOKS THAT ARE NEC AND TIA LISTED.
11. REPLACE CEILING TILE IF DAMAGED.
12. PAINT OR REPAIR ANY DAMAGE THAT OCCURS DURING INSTALLATION.

LABELING

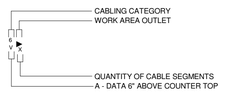
LABELING SHALL CONFORM TO ANSI/TIA/EIA-606(B) STANDARDS. IN ADDITION, PROVIDE THE FOLLOWING:

1. LABEL EACH OUTLET WITH PERMANENT BANDED SELF-ADHESIVE LABEL WITH MINIMUM 3/16 IN. HIGH CHARACTERS. LABELS SHALL BE MACHINE-PRINTED. HAND-LETTERED LABELS SHALL NOT BE ACCEPTED. ACCEPTABLE MANUFACTURERS INCLUDE BRADY AND PANDUIT.
2. LABEL EACH CABLE WITH PERMANENT SELF-ADHESIVE LABEL WITH MINIMUM, 1/8 IN. HIGH CHARACTERS, IN THE FOLLOWING LOCATIONS:
   A. INSIDE RECEPTACLE BOX AT THE WAO LOCATION.
   B. BEHIND THE PATCH PANEL OR PUNCH BLOCK IN ALL EQUIPMENT ROOMS.
3. LABEL THE FACE OF ALL COMMUNICATION PATCH PANELS. PROVIDE FACILITY ASSIGNMENT RECORDS IN A PROTECTIVE COVER AT EACH EQUIPMENT ROOM LOCATION THAT IS SPECIFIC TO THE FACILITIES TERMINATED THEREIN.
4. USE COLOR-CODED LABELS FOR EACH TERMINATION FIELD THAT CONFORMS TO ANSI/TIA/EIA-606(A) STANDARD COLOR CODES FOR TERMINATION BLOCKS.
5. LABEL CABLES, OUTLETS, PATCH PANELS, AND PUNCH BLOCKS WITH ROOM NUMBER IN WHICH OUTLET IS LOCATED, FOLLOWED BY A SINGLE LETTER SUFFIX TO INDICATE PARTICULAR OUTLET WITHIN ROOM, I.E., S2107A, S2107B. INDICATE RISER CABLES BY AN R FOLLOWED BY THE PAIR OR CABLE NUMBER.
6. FLOOR PLANS SHOWING OUTLET LOCATIONS, TYPE, AND CABLE MARKING SHALL BE PROVIDED TO THE DISTRICT TWO (2) WEEKS PRIOR TO MOVE-INTO ALLOW THE DISTRICTS PERSONNEL TO CONNECT AND TEST DISTRICT-PROVIDED EQUIPMENT IN A TIMELY FASHION.
7. RECORD DOCUMENTS SHALL BE PROVIDED TO THE DISTRICT IN ELECTRONIC FORMAT UTILIZING CAD SOFTWARE THAT IS ACCEPTABLE TO THE DISTRICT IN ACCORDANCE WITH THE CONTRACTOR'S AGREEMENT WITHIN FOUR (4) WEEKS OF ACCEPTANCE OF PROJECT BY THE DISTRICT.
8. REFERENCE EXAMPLE 1 FOR DETAILS REGARDING FWISD'S LABELING PLAN.
   DATA CLOSET - PATCH PANEL NUMBER IDENTIFIER, PORT NUMBER
   MDF A 17
9. FIBER OPTIC RACEWAY SHALL BE LABELED EVERY IN 25' INTERVALS WITH "DANGER! - FIBER OPTIC CABLE"

SYMBOL LEGEND

- NEW INTERACTIVE DISPLAY DATA CONNECTION. "X" INDICATES NUMBER OF DATA DROPS.
- EXISTING IWB (INTERACTIVE WHITE BOARD) DATA CONNECTION.
- CAT 6 DATA WALL OUTLET. "X" INDICATES NUMBER OF DATA DROPS AT THAT LOCATION. MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. "A" INDICATES TO MOUNT 6" ABOVE COUNTER.
- EXISTING DATA WALL OUTLET. "X" INDICATES NUMBER OF DATA DROPS AT THAT LOCATION. MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- CAT 6 TELEPHONE OUTLET, "X" INDICATES NUMBER OF TELEPHONE DROPS AT THAT LOCATION. MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- EXISTING TELEPHONE OUTLET. "X" INDICATES NUMBER OF TELEPHONE DROPS AT THAT LOCATION. MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- CAT 6 DATA VIDEO DATA DROPS . "X" INDICATES NUMBER OF DATA DROPS AT THAT LOCATION. MOUNT ABOVE CEILING IN A BACK BOX WITH FACE PLATE. TEST END TO END.
- EXISTING DATA VIDEO DATA DROPS . "X" INDICATES NUMBER OF DATA DROPS AT THAT LOCATION. MOUNT ABOVE CEILING IN A BACK BOX WITH FACE PLATE. TEST END TO END.
- COAX DROP MOUNTED 8' ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- EXISTING COAX DROP MOUNTED 8' ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- CAT 6 DATA/TELEPHONE OUTLET. "X" INDICATES NUMBER OF DROPS. ONE IS TELEPHONE AND THE REMAINDER WILL BE DATA DROPS. MOUNT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- AP - WIRELESS ACCESS POINT
- EXISTING AP - WIRELESS ACCESS POINT
- CAM - POE CAMERA
- EXISTING CAM - POE CAMERA
- FLOOR DATA OUTLET - "F" DENOTES FLUSH
- EXISTING FLOOR DATA OUTLET - "F" DENOTES FLUSH
- FLOOR RECEPTACLE/DATA OUTLET - "F" DENOTES FLUSH
- EXISTING FLOOR RECEPTACLE/DATA OUTLET - "F" DENOTES FLUSH
- CR CARD ACCESS READER AT 48"AFF UNLESS NOTED OTHERWISE
- DB DOOR BELL AT 48"AFF UNLESS NOTED OTHERWISE
- DC DOOR CONTACTS, SECURITY ALARM
- EM ELECTRIFIED MORTISE LOCK
- EX-CAM EXTERIOR CAMERA, MOUNT APPROXIMATELY 12' TO 15' ABOVE GRADE
- IWB INTERACTIVE WHITE BOARD, OWNER FURNISHED
- M MEDIA PASS THRU FOR THE IWB
- MC MAGNETIC CONTACTOR, SIZE, COIL VOLTAGE AND
- MD SECURITY MOTION DETECTOR
- PIWB PORTABLE INTERACTIVE WHITE BOARD, OWNER FURNISHED
- POE POWER OVER ETHERNET
- RE DOOR REQUEST-TO-EXIT
- SCR MOTORIZED PROJECTION SCREEN
- T THERMOSTAT OUTLET BOX (BY OTHERS)
- VC VOLUME CONTROL, MOUNT AT 44"ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED
- VID CEILING MOUNTED DIGITAL PROJECTOR
- WAO WALL AREA OUTLET, MOUNT AT 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED

DRAWING/DETAIL REFERENCE



SECURITY GENERAL NOTES

1. VERIFY EXACT LOCATION WITH THE OWNER OR GENERAL CONTRACTOR PRIOR TO INSTALLATION. ALL COMPONENTS AND DEVICES SHOWN ON THESE DRAWINGS ARE FOR APPROXIMATE LOCATION AND POSITIONING ONLY.
2. ALL SECURITY CABLING PATHWAYS OUTSIDE OF SECURITY ROOMS SHALL BE BY DIV 26. ALL CONDUIT RUNS SHALL BE FROM THE INSTALLED SECURITY DEVICE LOCATION TO THE NEAREST ACCESSIBLE CEILING SPACE.
3. CONTRACTOR SHALL COORDINATE WITH THE TELECOMMUNICATIONS CONTRACTOR AND CONSULT THE TELECOMMUNICATIONS DRAWINGS FOR DETAILS ON CABLE TRAY PATHWAYS AND J-HOOKS TO BE UTILIZED.
4. PROVIDE CONDUIT FOR ALL SECURITY CABLING LEAVING THE CABLE TRAY. ALL NECESSARY MEANS TO PROTECT ALL SECURITY CABLING AND CONNECTORS FROM MECHANICAL DAMAGE, DUST AND DIRT DURING CONSTRUCTION.
5. FIBER OPTIC BACKBONE/RISER/HORIZONTAL SECURITY CABLE SHALL BE INSTALLED IN INNERDUCT WHEN PLACED IN CONDUIT OR ON LADDER RUNWAY OR "J" HOOKS.
6. DATA NETWORK CONNECTIVITY OF DIGITAL VIDEO MANAGEMENT SYSTEM TO LAN/WAN SHALL BE BY TELECOM CONTRACTOR. SECURITY CONTRACTOR SHALL COORDINATE WITH TELECOM CONTRACTOR AND ITS PERSONNEL FOR IP ADDRESSES.
7. WALL PENETRATIONS FOR SECURITY CABLING SHALL BE SLEEVED WITH A MINIMUM OF 1" SLEEVES. SLEEVES SHALL BE PROPERLY FIRESTOPPED USING HILTI FIRE STOP IF IT IS THROUGH A FIRE RATED WALL.
8. THIS DRAWING IS DIAGRAMMATIC IN NATURE.
9. COORDINATION DRAWING SUBMITTAL SHALL INCLUDE IT CABLE TRAYS AND OR J-HOOKS, DUCTWORK, PIPING, LIGHTING, DOMESTIC WATER PIPING, DRAINAGE PIPING, AND FIRE SPRINKLER OVERLAYED ON THE REFLECTIVE CEILING PLAN, NEW INTERIOR LAYOUT AND EXISTING BUILDING STRUCTURE TO COORDINATE UTILITIES WITHIN THE TIGHT CONFINEMENTS OF THIS EXISTING BUILDING. SHOP DRAWINGS SHALL BE PROVIDED AT 1/4" = 1'-0" SCALE.

AUDIO/VIDEO GENERAL NOTES

1. ALL CONDUIT FOR LOW VOLTAGE WIRING IS EMT OF 1" UNLESS NOTED OTHERWISE AND TO BE SUPPLIED WITH NYLON PULL STRING. THE MAXIMUM LENGTH OF CONDUIT WITHOUT AN ACCESSIBLE JUNCTION BOX IS 100'. A MAXIMUM OF 2 BENDS IN CONDUIT WITHOUT AN INTERMEDIATE JUNCTION BOX. ALL INTERMEDIATE PULL BOXES TO REMAIN ACCESSIBLE BEFORE AND AFTER COMPLETION OF CONSTRUCTION. CONDUITS SHALL BE ALIGNED IN PULL BOXES FOR STRAIGHT PULL THROUGH. PULL BOXES ARE NOT TO BE USED IN LIEU OF 90 DEGREE ELBOWS.
2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING SCOPE OF WORK:
   A. PROVIDE AND INSTALL ALL CONDUIT, APPROPRIATE NYLON PULL STRING, JUNCTION BOXES, FLOOR BOXES, WIREWAYS, LIGHTING, BREAKER PANELS, AC WIRING, POWER RECEPTACLES, AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED TO ACCOMMODATE COMPLETE AND FUNCTIONAL AUDIO VISUAL SYSTEMS, UNLESS OTHERWISE NOTED.
   B. PROVIDE GROUND BUSSBAR FOR EACH AUDIO VISUAL EQUIPMENT RACK INCLUDING WALL MOUNTED, FLOOR STANDING AND MILL WORK RACKS. PROVIDE A MINIMUM OF #4 AWG GROUND CABLE FROM EACH AV RACK TO EARTH GROUND.
3. THE AUDIO VISUAL CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING SCOPE OF WORK:
   A. PROVIDE AND INSTALL ALL VIDEO DEVICES, INCLUDING CAMERAS, PROJECTORS, MONITORS, SWITCHERS, DISTRIBUTION AMPLIFIERS, CONNECTORS, WIRING AND OTHER VIDEO EQUIPMENT AS NECESSARY OR AS REQUIRED TO FURNISH A COMPLETE AND OPERATIONAL VIDEO SYSTEM.
   B. PROVIDE AND INSTALL ALL AUDIO DEVICES, INCLUDING MICROPHONES, MIXERS, SIGNAL PROCESSING EQUIPMENT, AMPLIFIERS, SPEAKERS, INTERCONNECTION LOW-VOLTAGE CABLE, CONNECTORS AND HARDWARE, AND OTHER AUDIO VISUAL EQUIPMENT AS NECESSARY OR AS REQUIRED TO FURNISH A COMPLETE AND OPERATIONAL AUDIO SYSTEM.
   C. PROVIDE AND INSTALL ALL AUDIO VISUAL RELATED CONTROL SYSTEM DEVICES, INCLUDING WIRED AND WIRELESS CONTROL PANELS, ASSOCIATED CARDS, MAINFRAME CHASSIS, CONTROL SYSTEM SOFTWARE AND PROGRAMMING, INTERCONNECTING LOW-VOLTAGE CABLE, CONNECTORS AND HARDWARE, AND OTHER CONTROL EQUIPMENT AS NECESSARY OR AS REQUIRED TO FURNISH A COMPLETE AND OPERATIONAL AUDIO-VISUAL CONTROL SYSTEM.
   D. PROVIDE, INSTALL AND TERMINATE ALL HIGH VOLTAGE WIRING WITHIN AUDIO VISUAL SYSTEM EQUIPMENT RACKS IN ACCORDANCE WITH APPLICABLE CODE AND ACCEPTED INDUSTRY STANDARDS.
4. OTHER APPLICABLE SUBCONTRACTORS ARE RESPONSIBLE FOR PROVIDING AND INSTALLING THE FOLLOWING:
   A. STRUCTURAL WORK, GLAZING, WALL OPENINGS, PLATFORMS, RAILINGS, HVAC SYSTEMS, MILLWORK AND FINISHES.
   B. CABLE TV SERVICE AND RELATED CABLING AND CONNECTIONS, TV RELATED ANTENNA SYSTEMS AND ELECTRICAL GROUNDING AS REQUIRED FOR CONNECTIONS OF AUDIO-VISUAL DEVICES.
   C. STRUCTURAL SUPPORT FOR ANY SUSPENDED AUDIO-VISUAL COMPONENTS.
5. CONDUITS SHALL NOT EXCEED 180 DEGREE OF BENDS BETWEEN PULL POINTS. INSTALL PULL BOXES AS REQUIRED TO MEET THIS REQUIREMENT. DO NOT CHANGE DIRECTION OR BEND WITHIN A JUNCTION BOX OR PULL BOX.
6. THIS DRAWING IS DIAGRAMMATIC IN NATURE.
7. COORDINATION DRAWING SUBMITTAL SHALL INCLUDE IT CABLE TRAYS, DUCTWORK, PIPING, LIGHTING, DOMESTIC WATER PIPING, DRAINAGE PIPING, AND FIRE SPRINKLER OVERLAYED ON THE REFLECTIVE CEILING PLAN, NEW INTERIOR LAYOUT AND EXISTING BUILDING STRUCTURE TO COORDINATE UTILITIES WITHIN THE TIGHT CONFINEMENTS OF THIS EXISTING BUILDING. SHOP DRAWINGS SHALL BE PROVIDED AT 1/4" = 1'-0" SCALE.

SYMBOL	DEVICE	PUBLIC ADDRESS DEVICE DESCRIPTION
S1	SPEAKER	PROVIDE ATLAS SOUND DT-12 1' X 2' SPEAKER 25V WITH EXTERNALLY TAP SELECTOR SWITCH. PROVE WHITE PLENUM RATED 22 AWG, 2 CONDUCTOR SHIELDED, TWISTED AND STRANDED CL2 SPEAKER WIRE FROM SPEAKER TO 3/4" CONDUIT DOWN WALL TO BACK BOX FOR CS100. PROVIDE PLASTIC BUSHINGS.
S2	HARD CEILING SPEAKER	PROVIDE ATLAS SOUND SD-72W SPEAKER ASSEMBLY WITH WHITE STEEL BAFFLE, 8" DUAL CONE SPEAKER AND INTEGRAL 25V / 70.7V MATCHING TRANSFORMER. POWER TAPS TO INCLUDE .25, .5, 1, 2, & 4 WATT FOR 25V AND 70.7V. PROVIDE ATLAS SOUND 95-8 STEEL RECESSED BACK CAN.
S3	HORN SPEAKER	PROVIDE ATLAS SOUND APF-15T FLUSH MOUNTED PAGING HORN, ATLAS 161SES SURFACE MOUNTED ENCLOSURE AND ATLAS SOUND VP161A-APF VANDAL PROOF SPEAKER BAFFLE. ROUTE WHITE PLENUM RATED 16 AWG, 2 CONDUCTOR, TWISTED AND STRANDED CL2 SPEAKER WIRE FROM HORN SPEAKER TO IDF ROOM TO SECURITY SWITCHING CARD SS16/SS32.
S4	WALL SPEAKER	PROVIDE ATLAS SOUND SD-72 TRANSFORMER ASSEMBLY, SE175-4 SURFACE MOUNT WHITE METAL ENCLOSURE AND ATLAS 161-8 WHITE BAFFLE ROUTE WHITE PLENUM RATED 16 AWG, 2 CONDUCTOR, TWISTED AND STRANDED CL2 SPEAKER WIRE FROM WALL SPEAKER TO IDF ROOM TO SECURITY SWITCHING CARD SS16/SS32.
T1	TIME CLOCK (SINGLE FACED)	PROVIDE SAPLING SBL-32S-404-4R WIRELESS CLOCK OR SBP-32S-404-0R & SAPLING SCB-000-000-1 24V POWER SUPPLY. PROVIDE WHITE CATEGORY 6, 24 AWG, TWISTED STRANDED PAIR FOR THE TIME CLOCKS. COORDINATE WITH FWISD PRIOR TO INSTALLATION.
T2	TIME CLOCK (DOUBLE FACED)	PROVIDE SAPLING SBD-32S-404-4R CLOCK, SAPLING SCB-000-000-1 24V POWER SUPPLY & SAB-4GD-00S-0 SURFACE DOUBLE MOUNT HOUSING ASSEMBLY FOR TWO SF CLOCKS. PROVIDE WHITE CATEGORY 6, 24 AWG, TWISTED STRANDED PAIR FOR THE TIME CLOCKS.

STANDARD JACK AND PATCH CABLE COLORS

1.	CATEGORY 5E	BLUE
2.	CATEGORY 6	BLACK
3.	CATEGORY 6A	GRAY
4.	ACCESS CONTROL DEVICES	PURPLE
5.	ENERGY MANAGEMENT	ORANGE
6.	PUBLIC ADDRESS SYSTEM	WHITE
7.	SECURITY CAMERA	PURPLE
8.	VIDEO SYSTEM	YELLOW
9.	WIRELESS ACCESS POINT	GREEN



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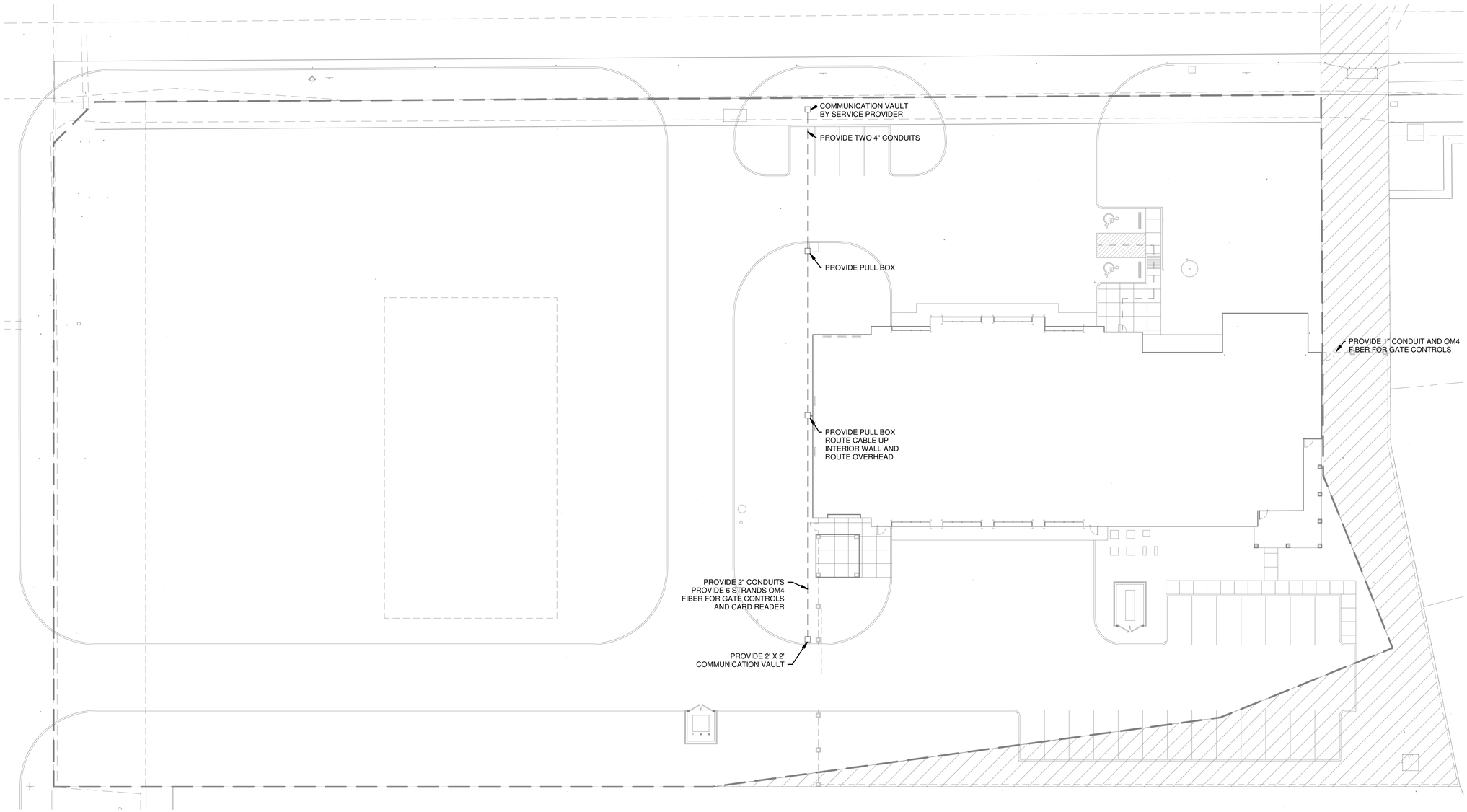
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TECHNOLOGY GENERAL NOTES & LEGENDS

SHEET SIZE:	22 x 34
JOB NO:	2016.166
DATE:	10/11/2019
SHEET:	T0.01

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N

1 / T0.03 TECHNOLOGY SITE FLOOR PLAN

1" = 20'-0"

No.	Description	Date
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KOMATSU ARCHITECTURE

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TECHNOLOGY SITE PLAN

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

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20' 0' 20' 40'

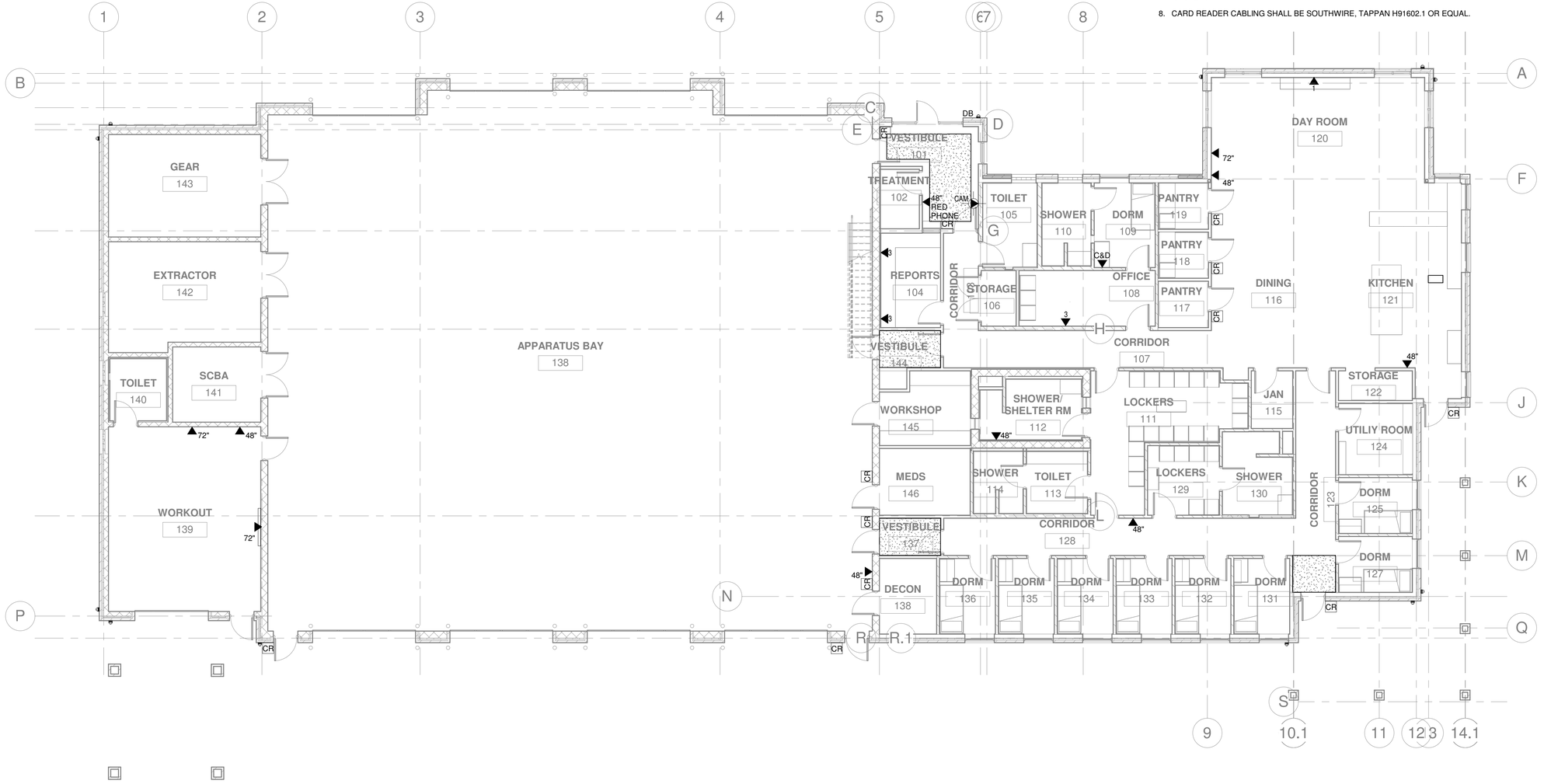
1" = 20'-0"

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JOB NO:	2016.166
DATE:	10/11/2019
SHEET:	T0.03

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TECHNOLOGY GENERAL NOTES:

1. ALL DATA CABLING SHALL BE PLENUM RATED CATEGORY 6. PROVIDE A 2' SERVICE LOOP.
2. ALL WAP CABLING SHALL BE PLENUM RATED CATEGORY 6A. ROUTE ABOVE CEILING AND PROVIDE A 20' SERVICE LOOP.
3. CONTRACTOR TO DETERMINE FINAL PATHWAYS FOR CONDUITS.
4. CONTRACTOR SHALL COORDINATE WITH ALL CONTRACTORS TO ENSURE CONDUIT PLACEMENT DOES NOT CONFLICT WITH LOCATION SENSITIVE COMPONENTS SUCH AS LIGHT FIXTURES AND DIFFUSERS.
5. ELECTRICAL CONTRACTOR TO PROVIDE ALL CONDUITS WITH 200 LB PULL CORDS.
6. ALL WIRING AND CONDUIT SIZES SHALL BE BASED ON THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
7. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVE A COMPLETE AND FUNCTIONING SYSTEM.
8. CARD READER CABLING SHALL BE SOUTHWIRE, TAPPAN H91602.1 OR EQUAL.



N

1 / T1.01 TECHNOLOGY FLOOR PLAN

1/8" = 1'-0"

8' 0' 8' 16'

1/8" = 1'-0"

STATE OF TEXAS
11/11/2019
JOHN S. O'KELLEY
31583
REGISTERED PROFESSIONAL ENGINEER

264.11.11.2019.19024

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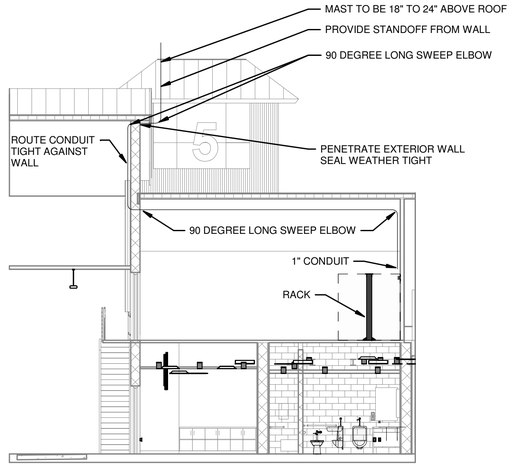
MANSFIELD FIRE STATION NO. 5

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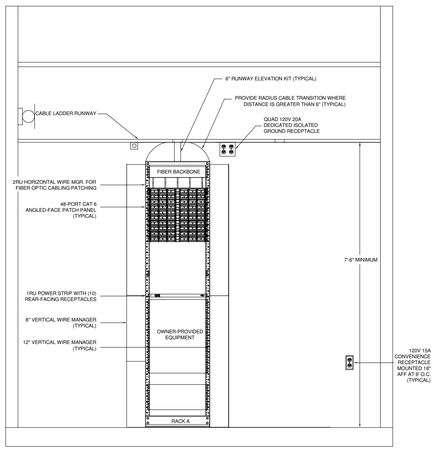
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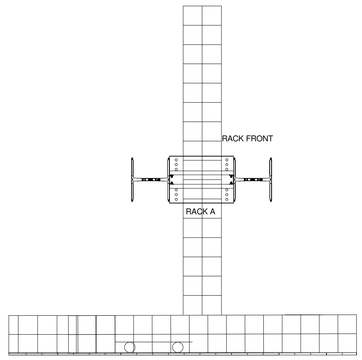
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SHEET:	T1.01

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3 T1.02 ANTENNA DETAIL

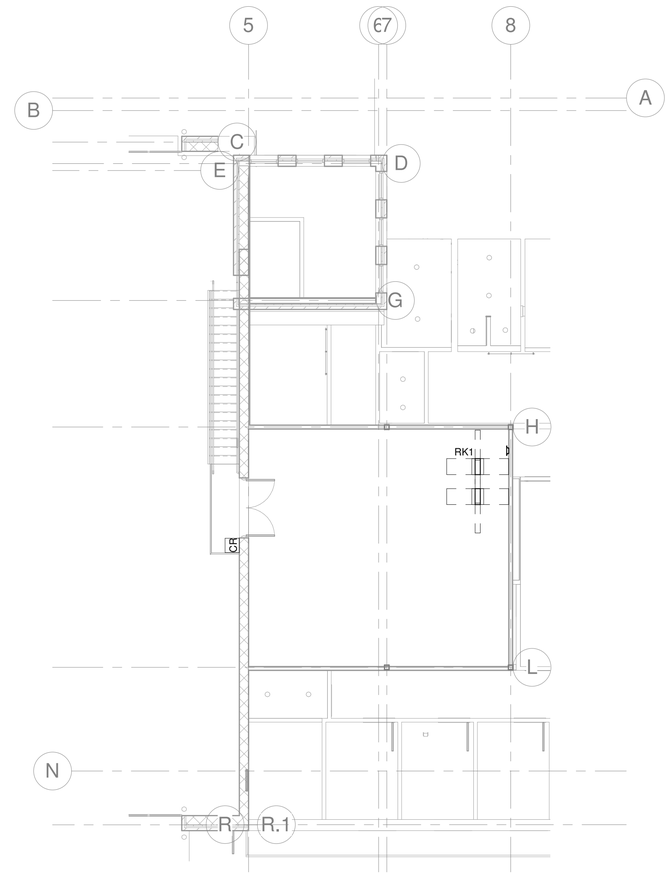




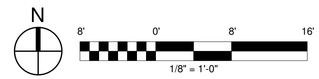
2 T1.02 TECHNOLOGY MDF RACK DETAILS AND SECTION
N/A

TECHNOLOGY GENERAL NOTES:

1. ALL DATA CABLING SHALL BE PLENUM RATED CATEGORY 6. PROVIDE A 2' SERVICE LOOP.
2. ALL WAP CABLING SHALL BE PLENUM RATED CATEGORY 6A. ROUTE ABOVE CEILING AND PROVIDE A 20' SERVICE LOOP.
3. CONTRACTOR TO DETERMINE FINAL PATHWAYS FOR CONDUITS.
4. CONTRACTOR SHALL COORDINATE WITH ALL CONTRACTORS TO ENSURE CONDUIT PLACEMENT DOES NOT CONFLICT WITH LOCATION SENSITIVE COMPONENTS SUCH AS LIGHT FIXTURES AND DIFFUSERS.
5. ELECTRICAL CONTRACTOR TO PROVIDE ALL CONDUITS WITH 200 LB PULL CORDS.
6. ALL WIRING AND CONDUIT SIZES SHALL BE BASED ON THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
7. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVE A COMPLETE AND FUNCTIONING SYSTEM.
8. CARD READER CABLING SHALL BE SOUTHWIRE, TAPPAN H91602.1 OR EQUAL.



1 T1.02 TECHNOLOGY MEZANINE PLAN
1/8" = 1'-0"





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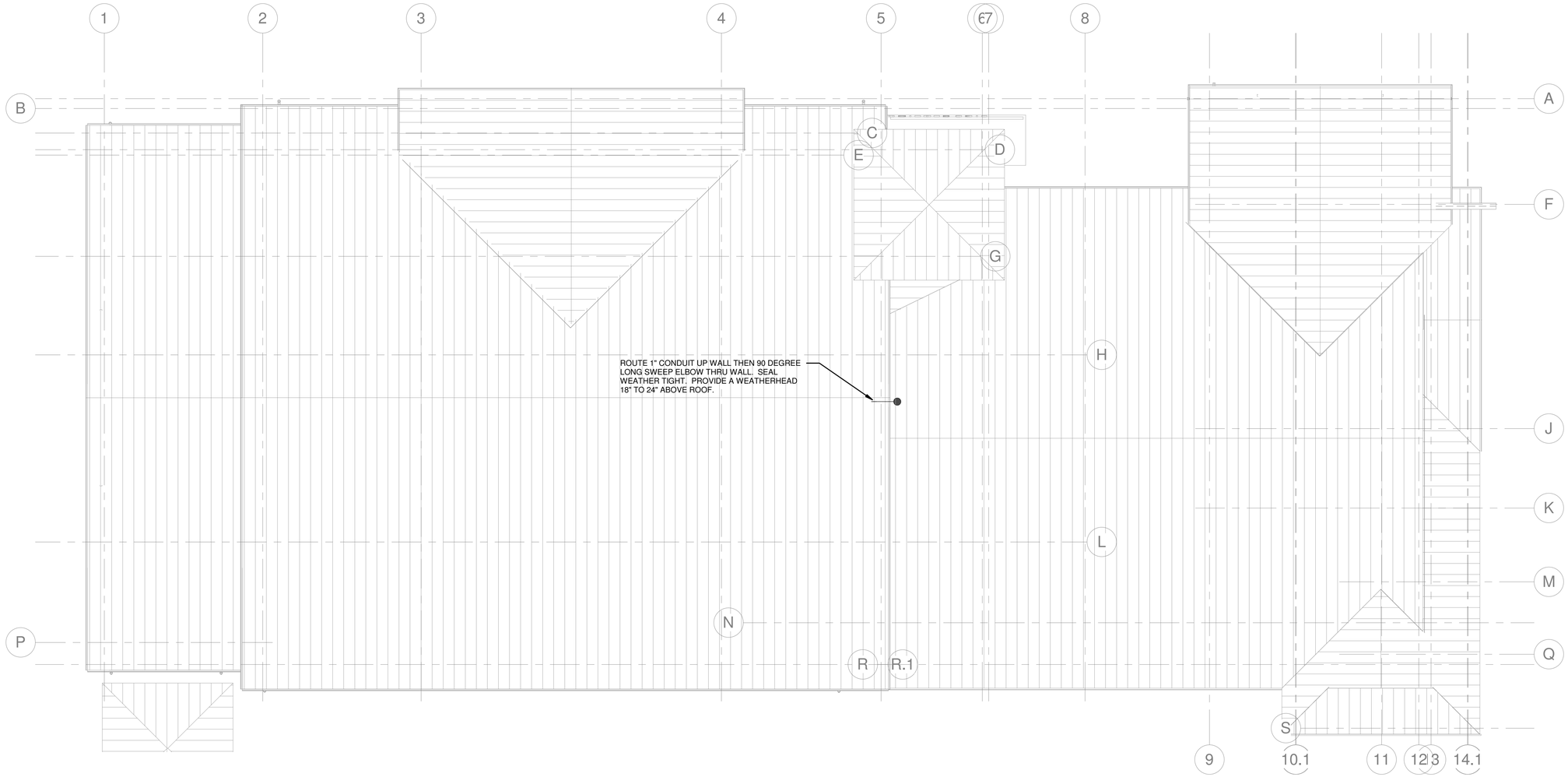
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TECHNOLOGY MEZANINE PLAN

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1 / T1.03 TECHNOLOGY ROOF PLAN

1/8" = 1'-0"

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TECHNOLOGY ROOF PLAN

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PROFESSIONAL ENGINEER

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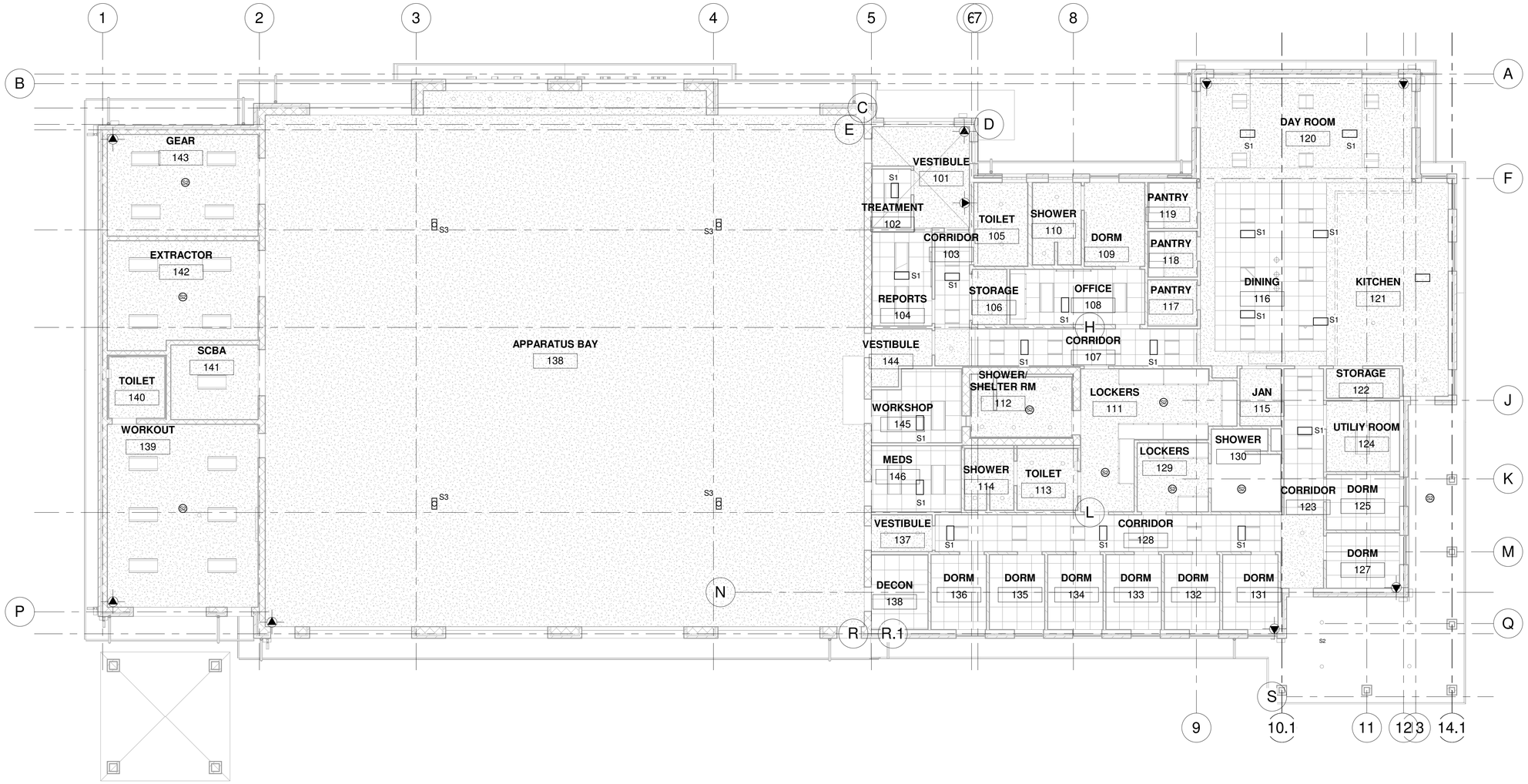
8' 0' 8' 16'

1/8" = 1'-0"

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1 T2.01 TECHNOLOGY RCP PLAN

1/8" = 1'-0"

8' 0' 8' 16'

1/8" = 1'-0"

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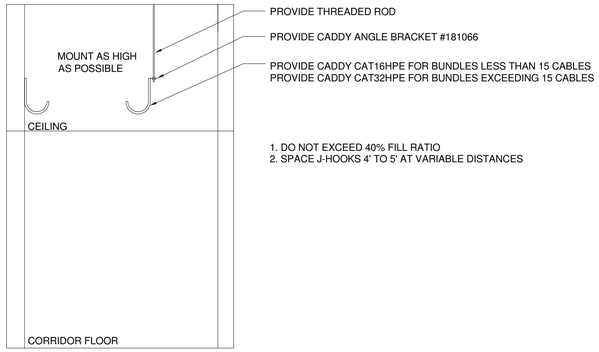
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TECHNOLOGY RCP PLAN

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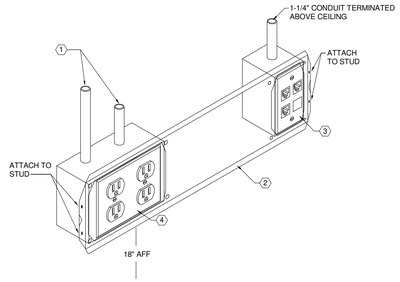
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1 CORRIDOR CABLE ROUTING WITH J-HOOKS
NO SCALE

NOTES BY SYMBOL "#"

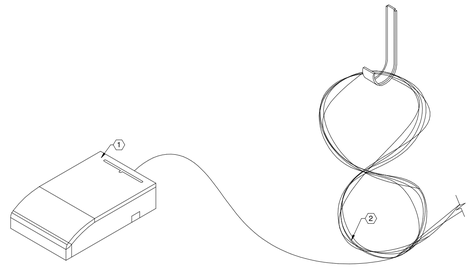
1. CONDUIT NUMBER, SIZE AND DESTINATION PER AV DRAWINGS.
2. PROVIDE MOUNTING BRACKET TO ENSURE BOTH THE WAO AND THE ELECTRICAL RECEPTACLE ARE ALIGNED AND NO FARTHER THAN 18" APART.
3. DATA/VOICE INFORMATION OUTLET/FACEPLATE/CONDUIT AS SPECIFIED IN T-SERIES DRAWINGS.
4. TECHNICAL AV POWER OUTLET/FACEPLATE/CONDUIT AS SPECIFIED IN E-SERIES DRAWINGS.



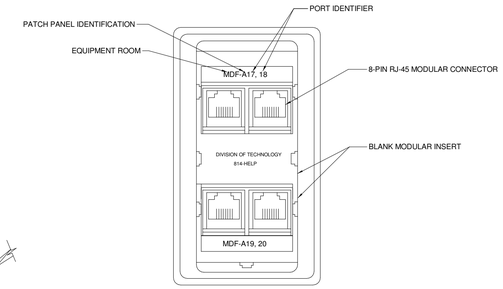
2 TYPICAL WAO WITH RECEPTACLE DETAIL
NO SCALE

NOTES BY SYMBOL "○"

1. PROVIDE A PANDUIT 2 PORT BISCUIT CBX2EI-AY WITH TWO GREEN MODULAR JACKS.
2. PROVE A 20' SERVICE LOOP OF CABLING IN A FIGURE 8'. COIL UP ABOVE CEILING SPACE AT WIRELESS BOX.



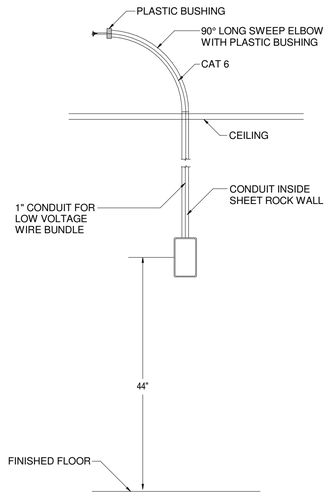
3 WIRELESS OUTLET DETAIL
NO SCALE



4 WALL AREA OUTLET
NO SCALE

NOTES BY SYMBOL "#"

1. LADDER TRAY IN IDF ROOM ONLY.
2. PROVIDE J-HOOK CABLE SUPPORT EVERY 4' TO 5' VARYING THE DISTANCES.
3. PROVIDE HILTI SPEED SLEEVE CP653 OR EQUAL.

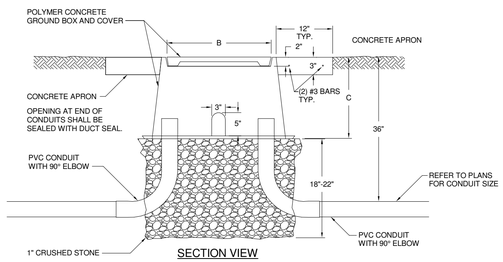


SHEET ROCK WALL MOUNTING DETAIL

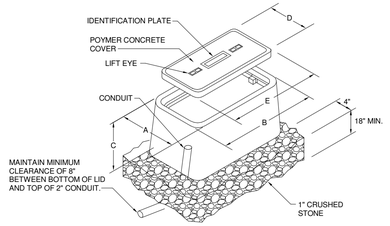
5 IN WALL CONDUIT FOR TELEPHONE
NO SCALE

NOTES BY SYMBOL "#"

1. BASKET TRAY IN CORRIDOR.
2. PROVIDE J-HOOK CABLE SUPPORT EVERY 4' TO 5' VARYING THE DISTANCES.
3. PROVIDE PLASTIC BUSHINGS ON CONDUIT SLEEVE. FIRE STOP AND SEAL AS SPECIFIED.
4. WALL OUTLET: 1" CONDUIT TO 4"x4" J-BOX.



SECTION VIEW



PULL BOX	NOMIAL GROUND BOX DIMENSIONS			NOMIAL COVER DIMENSIONS	
	A	B	C	D	E
TYPE B	15 1/2"	25"	18"	13 3/4"	23 1/2"

GROUND BOX DETAIL

NOTES:

1. ALL BOXES SHALL MEET ALL TEST REQUIREMENTS OF THE LATEST SCTE 77, "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY" FOR TIER 22 APPLICATIONS.
2. BOTTOM EDGE OF BOX OR EXTENSION SHALL BE FOOTED WITH A MINIMUM 1 1/4"FLANGE.
3. COVER LIFT EYE: MOLDED WITH COVER.
4. COVER MUST BE SECURED WITH "PENTA HEAD", STAINLESS STEEL, SELF CLEANING BOLTS AND NUTS.
5. THE GROUND BOXES FOR THIS PROJECT SHALL MEET THE REQUIREMENTS STATED ABOVE. THE CONTRACTOR WILL BE PERMITTED TO FURNISH LIKE MATERIALS OF ANY MANUFACTURER PROVIDED THEY ARE CERTIFIED BY A NATIONALLY RECOGNIZED INDEPENDENT TESTING LAB AND THEY ARE OF EQUAL OR BETTER QUALITY AND COMPLY WITH THE SPECIFICATIONS.

6 GROUND PULL BOX DETAIL
NO SCALE



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KOMATSU ARCHITECTURE

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TECHNOLOGY DETAILS

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